Form No. S12A
表格第 S12A 號

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131)

根據《城市規劃條例》(第131章)第12A條遞交的修訂圖則申請

Applicant who would like to publish the notice of application in local newspapers to meet one of the Town Planning Board's requirements of taking reasonable steps to obtain consent of or give notification to the current land owner, please refer to the following link regarding publishing the notice in the designated newspapers: https://www.info.gov.hk/tpb/en/plan_application/apply.html

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

此文件在 2019年 7月 16日 收到，城市規劃委員會只會在收到所有必要的資料及文件後才正式確認收到申請的日期。

This document is received on 16 JUL 2019. The Town Planning Board will formally acknowledge the date of receipt of the application only upon receipt of all the required information and documents.

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

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

& Please attach documentary proof 請夾附證明文件

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

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

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

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

For Official Use Only 請勿填寫此欄	Application No. 申請編號	Y/TM/23
	Date Received 收到日期	16 JUL 2019

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

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

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

1. Name of Applicant 申請人姓名/名稱

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

Tin Kwong Lun Yee Limited

天罡隆義有限公司

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

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

Toco Planning Consultants Limited

達材都市規劃顧問有限公司

3. Application Site 申請地點

(a)	Whether the application directly relates to any specific site? 申請是否直接與某地點有關？	Yes 是 ☑ No 否 ☐ (Please proceed to Part 6 請繼續填寫第 6 部分)
(b)	Full address/ location/ demarcation district and lot number (if applicable) 詳細地址／地點／丈量約份及地段號碼（如適用）	Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744H and 1744I in D.D. 132, Hing Fu Street, Tuen Mun
(c)	Site Area 申請地點面積	3,137 sq.m 平方米 ☑ About 約

(d) Area of Government land included (if any) 所包括的政府土地面積 (倘有)	N/A sq.m 平方米 ☐ About 約
(e) Current use(s) 現時用途	Three 2-storey building blocks for religious and columbarium uses. Temporary structure 1: management office Temporary structure 2: guard house/ staff quarter Temporary structure 3: storage Temporary structures 4 & 5: toilets (If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)

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

The applicant 申請人 –

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

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

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

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

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

N.A

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

(b) The applicant 申請人 –

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

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

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

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

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

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

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

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

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

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

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

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

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

Others 其他

☐ others (please specify)
其他（請指明）

_____

_____

_____

_____

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

6. Plan Proposed to be Amended 擬議修訂的圖則

(a) Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	Approved Tuen Mun Outline Zoning Plan No. S/TM/35
(b) Land use zone(s) involved (if applicable) 涉及的土地用途地帶(如適用)	Green Belt

7. Proposed Amendments 擬議修訂

(a) Propose to rezone the application site to the following zone(s)/use(s)
(May insert more than one 「✓」) (Please illustrate the details on plan)
建議將申請地點的用途地帶改劃作下列地帶 / 用途
(可在多於一個方格內加上「✓」號) (請在圖則顯示詳情)

☐ Comprehensive Development Area [ ]
綜合發展區 [ ]

☐ Residential (Group ☐A/☐B/☐C/☐D/☐E) [ ]
住宅 (☐甲類 / ☐乙類 / ☐丙類 / ☐丁類 / ☐戊類) [ ]

☐ Agriculture [ ] 農業 [ ]

☐ Industrial (Group D) [ ] 工業 (丁類) [ ]

☑ Government, Institution or Community [ ]
政府、機構或社區 [ ]

☐ Recreation [ ] 康樂 [ ]

☐ Country Park [ ] 郊野公園 [ ]

☐ Conservation Area [ ] 自然保育區 [ ]

☐ Commercial [ ] 商業 [ ]

☐ Village Type Development [ ]
鄉村式發展 [ ]

☐ Industrial [ ] 工業 [ ]

☐ Open Storage [ ] 露天貯物 [ ]

☐ Open Space [ ] 休憩用地 [ ]

☐ Green Belt [ ] 綠化地帶 [ ]

☐ Coastal Protection Area [ ]
海岸保護區 [ ]

☐ Site of Special Scientific Interest [ ]
具特殊科學價值地點 [ ]

☐ Other Specified Uses (☐Business/☐Industrial Estate/☐Mixed Use/☐Rural Use/☐Petrol Filling Station/
☐Others (please specify_____)) [ ]
其他指定用途 (☐商貿 / ☐工業邨 / ☐混合用途 / ☐鄉郊用途 / ☐加油站 /
☐ 其他 (請註明：_____)) [ ]

☐ Road 道路

☐ Others (please specify_____)
其他 (請註明：_____)

Please insert subzone in [ ] as appropriate.
請於[ ]內註明支區，如適用。

☑ Proposed Notes of Schedule of Uses of the zone attached
已夾附對土地用途地帶的《註釋》的擬議修訂

(b) Propose to amend the Notes of the Plan(s) 建議修訂圖則的《註釋》

☐ Covering Notes 《註釋》說明頁

☑ Notes of the zone applicable to the Site 適用於申請地點土地用途地帶的《註釋》

Details of the proposed amendment(s) to the Notes of the Plan, where appropriate, are as follows:
(Please use separate sheets if the space below is insufficient)
建議修訂圖則的《註釋》的詳情，如適用：
(如下列空間不足，請另頁說明)

Please see attached Planning Statement.

8. Details of Proposed Amendment (if any) 擬議修訂詳情 (倘有)

☑ Particulars of development are included in the **Appendix**.
附錄包括一個擬議發展的細節。

☐ No specific development proposal is included in this application.
這宗申請並不包括任何指定的擬議發展計劃。

9. Justifications 理由

The applicant is invited to provide justifications in support of the application. Use separate sheets if necessary.
現請申請人提供申請理由及支持其申請的資料。如有需要請另頁說明。

Please see attached Planning Statement.

10. Declaration 聲明

I hereby declare that the particulars given in this application are correct and true to the best of my knowledge and belief.
本人謹此聲明，本人就這宗申請提交的資料，據本人所知及所信，均屬真實無誤。

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

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

CHAN TAT CHOI ..... Managing Director .....

Name in Block Letters 姓名（請以正楷填寫） Position (if applicable) 職位 （如適用）

Professional Qualification(s) 專業資格
☑ Member 會員 / ☐ Fellow of 資深會員
☑ HKIP 香港規劃師學會 / ☐ HKIA 香港建築師學會 /
☐ HKIS 香港測量師學會 / ☐ HKIE 香港工程師學會 /
☐ HKILA 香港園境師學會/ ☐ HKIUD 香港城市設計學會
Others 其他 MPIA and RPP

on behalf of 代表 Toco Planning Consultants Limited

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

Date 日期 28.6.2019 (DD/MM/YYYY 日/月/年)

Remark 備註

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

Warning 警告

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

Statement on Personal Data 個人資料的聲明

1. The personal data submitted to the Board in this application will be used by the Secretary of the Board and Government departments for the following purposes:
委員會就這宗申請所收到的個人資料會交給委員會秘書及政府部門，以根據《城市規劃條例》及相關的城市規劃委員會規劃指引的規定作以下用途：

   (a) the processing of this application which includes making available the name of the applicant for public inspection when making available this application for public inspection; and
   處理這宗申請，包括公布這宗申請供公眾查閱，同時公布申請人的姓名供公眾查閱；以及
   (b) facilitating communication between the applicant and the Secretary of the Board/Government departments.
   方便申請人與委員會秘書及政府部門之間進行聯絡。

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

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

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131)
根據城市規劃條例(第 131 章)第 12A 條遞交的修訂圖則申請

Development Proposal (only for indicative purpose)
擬議發展的發展計劃（只作指示用途）

1. Development Proposal 擬議發展計劃

☑ Proposed Gross floor area (GFA) 擬議總樓面面積 ..... 489.16 ..... sq.m. 平方米 ☑ About 約
☑ Proposed plot ratio 擬議地積比率 ..... 0.155 ..... ☑ About 約
☑ Proposed site coverage 擬議上蓋面積 ..... 7.816 ..... % ☑ About 約
☑ Proposed number of blocks 擬議座數 ..... 3 .....
☑ Proposed number of storeys of each block 每座建築物的擬議層數 ..... 2 ..... storeys 層
☐ include 包括 ..... storeys of basements 層地庫
☐ exclude 不包括 ..... storeys of basements 層地庫

☑ Proposed building height of each block 每座建築物的擬議高度 ..... 6.2 (Block 1), 5.65 (Block 2), 6.2 (Block 3) ..... m 米 ☑ About 約
..... mPD 米(主水平基準上) ☐ About 約

☐ Domestic part 住用部分
GFA 總樓面面積 ..... sq.m. 平方米 ☐ About 約
number of units 單位數目 .....
average unit size 單位平均面積 ..... sq.m. 平方米 ☐ About 約
estimated number of residents 估計住客數目 .....

GFA 總樓面面積

☑ Non-domestic part 非住用部分 ..... sq.m.平方米 ☐ About 約
☐ hotel 酒店 ..... sq.m.平方米 ☐ About 約
(please specify the number of rooms 請註明房間數目: .....)
☐ office 辦公室 ..... sq.m.平方米 ☐ About 約
☐ shop and services/eating place 商店及服務行業/食肆 ..... sq.m.平方米 ☐ About 約

☐ Government, institution or community facilities 政府、機構或社區設施
(please specify the use(s) and concerned land area(s)/GFA(s))
(請註明用途及有關的地面面積/總樓面面積)
.....
.....
.....

☑ other(s)其他
(please specify the use(s) and concerned land area(s)/GFA(s))
(請註明用途及有關的地面面積/總樓面面積)
Columbarium: 272.658 sq.m, Staircase + store room: 8.811 sq.m, Staircase: 22.869 sq.m
Staircase, circulation space & store room: 13.064 sq.m, Management office: 5.47 sq.m.
Toilet for disabled and staff: 6.721 sq.m, Columbarium and Religious Use: 159.567 sq.m

☑ Open space 休憩用地
(please specify land area(s)) (請註明面積)
☑ private open space 私人休憩用地 About 2,329.13 sq.m.平方米 ☑ Not less than 不少於
☐ public open space 公共休憩用地 ..... sq.m.平方米 ☐ Not less than 不少於

☑ Transport-related facilities 與運輸有關的設施

☑ parking spaces 停車位 (please specify type(s) and number(s)) (請註明種類及數目)

Private Car Parking Spaces 私家車車位	8 for private car parking (2.5m x 5m) & 2 for disabled parking (3.5m x 5m)
Motorcycle Parking Spaces 電單車車位	
Light Goods Vehicle Parking Spaces 輕型貨車泊車位	
Medium Goods Vehicle Parking Spaces 中型貨車泊車位	
Heavy Goods Vehicle Parking Spaces 重型貨車泊車位	
Others (Please Specify) 其他 (請列明)	

☑ loading/unloading spaces 上落客貨車位 (please specify type(s) and number(s)) (請註明種類及數目)

Taxi Spaces 的士車位	
Coach Spaces 旅遊巴車位	4 bays for the proposed 24-seat shuttle bus services (3m x 8m)
Light Goods Vehicle Spaces 輕型貨車車位	
Medium Goods Vehicle Spaces 中型貨車車位	
Heavy Goods Vehicle Spaces 重型貨車車位	
Others (Please Specify) 其他 (請列明)	

☐ other transport-related facilities 其他與運輸有關的設施 (please specify type(s) and number(s)) (請註明種類及數目)

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

[Block number] [座數]	[Floor(s)] [層數]	[Proposed use(s)] [擬議用途]
1	G/F	Columbarium, Staircase + store room
	1/F	Columbarium, Staircase
2	G/F	Columbarium, Management office, Toilet for disabled, Staircase, circulation space + store room
	1/F	Columbarium, Staircase
3	G/F	Columbarium and Religious use, Staircase
	1/F	Columbarium and Religious use, Staircase

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

Landscape courtyard, carpark, loading/unloading bays, internal access road and circulation area.

Any vehicular access to the site? 是否有車路通往地盤?

Yes 是 ☑ There is an existing access. (please indicate the street name, where appropriate)
有一條現有車路。(請註明道路名稱(如適用))
Please see attached Planning Statement.

☐ There is a proposed access. (please illustrate on plan and specify the width)
有一條擬議車路。(請在圖則顯示，並註明車路的闊度)

No 否 ☐

For Development involving columbarium use, please complete the table in the Annex to this Appendix.
如發展涉及靈灰安置所用途，請填妥於此附件後附錄的表格。

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

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

Does the development proposal involve alteration of existing building? 擬議發展計劃是否包括現有建築物的改動?	Yes 是	☐ Please provide details 請提供詳情 ....
	No 否	☑
Does the development proposal involve the operation on the right? 擬議發展是否涉及右列的工程?	Yes 是	☐ (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用地盤平面圖顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍) ☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約 ☐ Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填土厚度 ..... m 米 ☐About 約 ☐ Excavation of land 挖土 Area of excavation 挖土面積..... sq.m 平方米 ☐About 約 Depth of excavation 挖土深度 .....m 米 ☐About 約
	No 否	☑

Would the development proposal cause any adverse impacts? 擬議發展計劃會否造成不良影響？	On environment 對環境	Yes 會 ☐	No 不會 ☑
	On traffic 對交通	Yes 會 ☐	No 不會 ☑
	On water supply 對供水	Yes 會 ☐	No 不會 ☑
	On drainage 對排水	Yes 會 ☐	No 不會 ☑
	On slopes 對斜坡	Yes 會 ☐	No 不會 ☑
	Affected by slopes 受斜坡影響	Yes 會 ☐	No 不會 ☑
	Landscape Impact 構成景觀影響	Yes 會 ☐	No 不會 ☑
	Tree Felling 砍伐樹木	Yes 會 ☐	No 不會 ☑
	Visual Impact 構成視覺影響	Yes 會 ☐	No 不會 ☑
	Others (Please Specify) 其他 (請列明)	Yes 會 ☐	No 不會 ☑
	_____		
	_____		

Please state measure(s) to minimise the impact(s). For tree felling, please state the number, diameter at breast height and species of the affected trees (if possible)
請註明盡量減少影響的措施。如涉及砍伐樹木，請說明受影響樹木的數目、及胸高度的樹幹直徑及品種(倘可)

Please see attached Planning Statement.
.....
.....
.....
.....
.....
.....

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

Ash interment capacity 骨灰安放容量@

Maximum number of sets of ashes that may be interred in the niches 在龕位內最多可安放骨灰的數量	18,125 urns
Maximum number of sets of ashes that may be interred other than in niches 在非龕位的範圍內最多可安放骨灰的數量	N/A
Total number of niches 龕位總數	11,094 niches
Total number of single niches 單人龕位總數	4,349 niches
Number of single niches (sold and occupied) 單人龕位數目 (已售並佔用)	8 niches
Number of single niches (sold but unoccupied) 單人龕位數目 (已售但未佔用)	928 niches
Number of single niches (residual for sale) 單人龕位數目 (待售)	3,413 niches
Total number of double niches 雙人龕位總數	6,602 niches
Number of double niches (sold and fully occupied) 雙人龕位數目 (已售並全部佔用)	0 niches
Number of double niches (sold and partially occupied) 雙人龕位數目 (已售並部分佔用)	0 niches
Number of double niches (sold but unoccupied) 雙人龕位數目 (已售但未佔用)	0 niches
Number of double niches (residual for sale) 雙人龕位數目 (待售)	6,602 niches
Total no. of niches other than single or double niches (please specify type) 除單人及雙人龕位外的其他龕位總數 (請列明類別)	143 four-urn niches
Number. of niches (sold and fully occupied) 龕位數目 (已售並全部佔用)	0 niches
Number of niches (sold and partially occupied) 龕位數目 (已售並部分佔用)	0 niches
Number of niches (sold but unoccupied) 龕位數目 (已售但未佔用)	0 niches
Number of niches (residual for sale) 龕位數目 (待售)	143 niches
Proposed operating hours 擬議營運時間	10:00 a.m. - 17:00 p.m. for normal days 9:00 a.m. - 18:00 p.m. for Ching Ming and Chung Yeung festive periods

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

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達材都市規劃顧問有限公司

The Secretary,
Town Planning Board
15th Floor
North Point Government Offices
333 Java Road
North Point,
Hong Kong

Dear Sir/ Madam,

12 July, 2019

**Section 12A Rezoning Application from "GB" to "G/IC"
for a Religious Institution and Columbarium in Tin Kwong Lun Yee,
Lot Nos. 1744A-C and 1744G-I in D.D. 132, Tuen Mun**

We refer to the captioned application submitted on 28.6.2019.

We would like to clarify that the proposed container toilet/ portable toilet for Tin Kwong Lun Yee will only be arranged during the Ching Ming and Chung Yeung Festival Days and their shadow period. The temporary toilet facilities as marked on the Master Layout Plan (Plan F) of the Planning Statement are for indicative purpose only.

Furthermore, we would like to clarify the maximum building height in Tin Kwong Lun Yee should be 6.2m instead of 7m. An amended Table 4.1 (Page 10) and Table 4.2 (Page 11) of the Planning Statement are attached for your attention.

Yours faithfully,
Toco Planning Consultants Ltd.

Ted Chan
Managing Director

TED T. C. CHAN
MPIA, MHKIP, RPP

4.1.2 Architectural Design Statement

The proposed master layout plan has incorporated features that are complementary to the columbarium development, namely:-

1. A pedestrian zone to connect the main entrance to different blocks and allow visitors to walk pleasantly during the visit, which would also benefit the visitors who come to conduct the traditional memorials and ancestor rites;

2. A few ramps with gentle slope to connect the ground floor to the upper floor. The availability of ramps greatly improves the mobility and participation opportunities of the elderly, people with disabilities and adults with young children; and

3. An Emergency Vehicle Access (EVA), in front of the existing buildings, to allow fire appliances to enter the fire scene without obstruction. The width of the EVA is 7.3m and can serve at least one major facade of the buildings.

4.1.3 Development Schedule

The development schedule of the proposed scheme and the planning parameters of the proposed facilities are shown in **Table 4.1** and **Table 4.2** respectively. The ash interment layout inside the three blocks in TKLY will remain the same as of 30.6.2017 and niche count for TKLY on 30.6.2017 which was submitted as part of the Columbarium Licence and TSOL applications to PCLB is shown in **Table 4.3**.

Table 4.1: Development Schedule of the Proposed Development

	Application Site
Site Area (m^2)	About 3,137m^2
Plot Ratio	0.155 (approximate)
Proposed GFA (m^2)	About 489.16m^2
Site Coverage	7.816% (approximate)
No. of Block(s)	3
Maximum Building Height	2 storeys (about 6.2m)
No. of niche(s)	11,094 niches
No. of car parking spaces(s)	10 spaces for visitors (including 2 disabled parking)
No. of Lay-by(s)	4 bays for shuttle bus

Table 4.2: Planning Parameters of the Proposed Facilities

Building	Building Height	Level	Facilities	G.F.A.
Block 1	6.2m	G/F	• Columbarium	84.010m^2
			• Staircase + store room	8.811m^2
		1/F	• Columbarium	86.500m^2
			• Staircase	6.321m^2
Block 2	5.65m	G/F	• Columbarium	40.678m^2
			• Management office	5.470m^2
			• Toilet for disabled and staff	6.721m^2
			• Staircase, circulation space + store room	13.064m^2
		1/F	• Columbarium	61.470m^2
			• Staircase	4.463m^2
Block 3	6.2m	G/F	• Columbarium and Religious use	80.011m^2
			• Staircase	5.815m^2
		1/F	• Columbarium and Religious use	79.556m^2
			• Staircase	6.270m^2
			Total	**489.160m^2**

Table 4.3: Niche Count at 30.6.2017

Classification		Block 1	Block 2	Block 3	Total
No. of Sold & Occupied Niches	Single-Urn Niche	8	0	0	8
	Double-Urn Niche	0	0	0	0
	Family Niche For 4 Members	0	0	0	0
No. of Sold but Not Yet Occupied Niches	Single-Urn Niche	928	0	0	928
	Double-Urn Niche	0	0	0	0
	Family Niche For 4 Members	0	0	0	0
No. of Niches Available for Sale	Single-Urn Niche	3,413	0	0	3,413
	Double-Urn Niche	0	2,688	3,914	6,602
	Family Niche For 4 Members	0	57	86	143
Total		4,349	2,745	4,000	11,094

Section 12A Rezoning Application from "GB" to "G/IC" for a Religious Institution and Columbarium in Tin Kwong Lun Yee, Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744H & 1744I in D.D. 132, Tuen Mun

Planning Statement



CONSULTANT TEAM

Toco Planning Consultants Ltd.

A&B Architects Ltd.

Blanc Design Studio

OZZO Technology (HK) Ltd.

SMEC Asia Ltd.

TOCO

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Executive Summary

The rezoning application is submitted by Toco Planning Consultants Ltd. on behalf of Tin Kwong Lun Yee Ltd. (TKLY). It is for the permission of the Town Planning Board to amend the zoning of the site covering Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744H and 1744I in D.D. 132 on the Approved Tuen Mun Outline Zoning Plan No. S/TM/35 from "Green Belt" zone to "Government, Institution or Community" zone. The proposed zoning will permit the subsequent submission of a section 16 planning application for regularising the existing religious institution and columbarium at the site.

TKLY is a religious institution dedicated for Lang Yan Sing Gau, which is a branch of Tibetan Buddhism Vajrayana. It is dedicated to provide training and coaching to members who have to realize the Buddha's teaching in their daily life and to benefit all sentient beings. On 30.6.2017, the Private Columbaria Ordinance (PCO) came into effect and the Government is prepared to adopt a pragmatic and sensitive approach to resolve properly the historic problem of Pre-cut-off Columbaria in order to minimise any social concern arising from people who have purchased these niches and massive displacement of interred ashes before the introduction of regulatory regime. In response to the latest requirements of PCO, the Applicant had submitted both applications for Columbarium Licence and Temporary Suspension of Liability for Pre-cut-off Columbarium in TKLY to the Private Columbaria Licensing Board on 8.2.2018. During the 3 years of the validity period, the Applicant has to comply with all statutory and government requirements, including town planning, land lease and building safety.

This present application is submitted to comply with the regulatory requirements of PCO. It is line with the Government's intention to relieve part of the urgent demand for columbarium niche spaces in Hong Kong. The application site covers three 2-storey buildings with a total of 11,094 sold and unsold niches before 30.6.2017. No additional building will be provided at the site and temporary structures within the site will be demolished in order to meet the relevant government regulations. The application site is considered suitable for religious and columbarium use because it is located on top of a flat platform and is within an area with strong religious background and graves. The adjacent overhead power lines have constrained the development potential of the site for other uses. Planning and technical assessments have shown that the proposed development will not result in any significant impact on the land use, traffic, environmental, sewerage, visual and landscape aspects of the locality. A Management Plan will be implemented during the grave sweeping occasions to minimise the potential impact on the traffic and pedestrian network in the vicinity of the site. In addition to a road improvement proposal for the access between Hing Fu Street Roundabout and the site, internal transport and disabled facilities, sanitary fitments, landscaping treatment have been proposed for the site and no burning of joss papers will be permitted. In view of its religious background, site suitability for the proposed use and the new policy initiatives, the application will not set an undesirable precedent for similar applications.

簡介

天罡隆義有限公司透過達材都市規劃顧問有限公司，現向城市規劃委員會遞交更改用途區規劃申請，將位於屯門丈量約份第 132 約地段第 1744 號 A 分段、1744 號 B 分段、1744 號 C 分段、1744 號 F 分段、1744 號 G 分段、1744 號 H 分段及 1744 號 I 分段，由現時在屯門分區計劃大綱核准圖編號 S/TM/35 內之「綠化地帶」用途區改爲「政府、機構或社區」用途區，以准許其後作出城規條例第 16 條規劃申請，將地盤內的現有宗教設施及靈灰安置所規範化。

天罡隆義是一所隸屬於能仁聖教的宗教機構，是藏傳佛教密宗的支派，致力爲信眾提供宗教修行和指導，讓信眾在日常生活中體驗佛學並使眾生受益。私營骨灰安置所條例(下稱「條例」)於 2017 年 6 月 30 日生效，政府有意把截算前骨灰安置所這些歷史問題妥善處理，以避免在引入規管制度前已購買龕位之人士蒙受損失及大量已安放骨灰被遷移，而引致社會不安。申請人因應條例的最新要求，已於 2018 年 2 月 8 日向私營骨灰安置所發牌委員會提交了截算前骨灰安置所之牌照及暫免法律責任書申請，申請人必需在三年內符合城規、地政及建築安全等要求。

是次申請迎合條例之法定要求，並滿足公眾人士對骨灰存放位的強烈需求。申請地盤包括三座兩層高的建築物，當中共有 11,094 個在 2017 年 6 月 30 日時已出售和仍未售之靈灰位。擬議計劃之建築物不會新增建築物，但會將臨時結構物拆除，以符合相關法例要求。地盤雖然被附近的高壓電纜影響了發展潛力，但鑒於地盤位於半山平台上及鄰近宗教團體和墓地，因此適合作宗教及靈灰安置所用途。經過詳細的規劃及工程研究，顧問公司認爲本計劃不會對本區及附近的土地利用、交通、環境、排水、排污、視覺景觀及園景造成不良影響。本計劃將於祭祖節日實施管理方案，以減少對地盤及附近的交通及行人網絡造成的潛在影響。除此之外，本計劃將會對連接地盤和興富街迴旋處的道路進行改善，並於地盤內提供足夠場內交通、傷殘和衛生設備及園林綠化方案，並禁止任何燃燒冥鏹活動。基於天罡隆義的宗教背景、地盤對申請用途的適合性和最新政策措施，本申請不會對類似申請構成不良先例。

1. INTRODUCTION

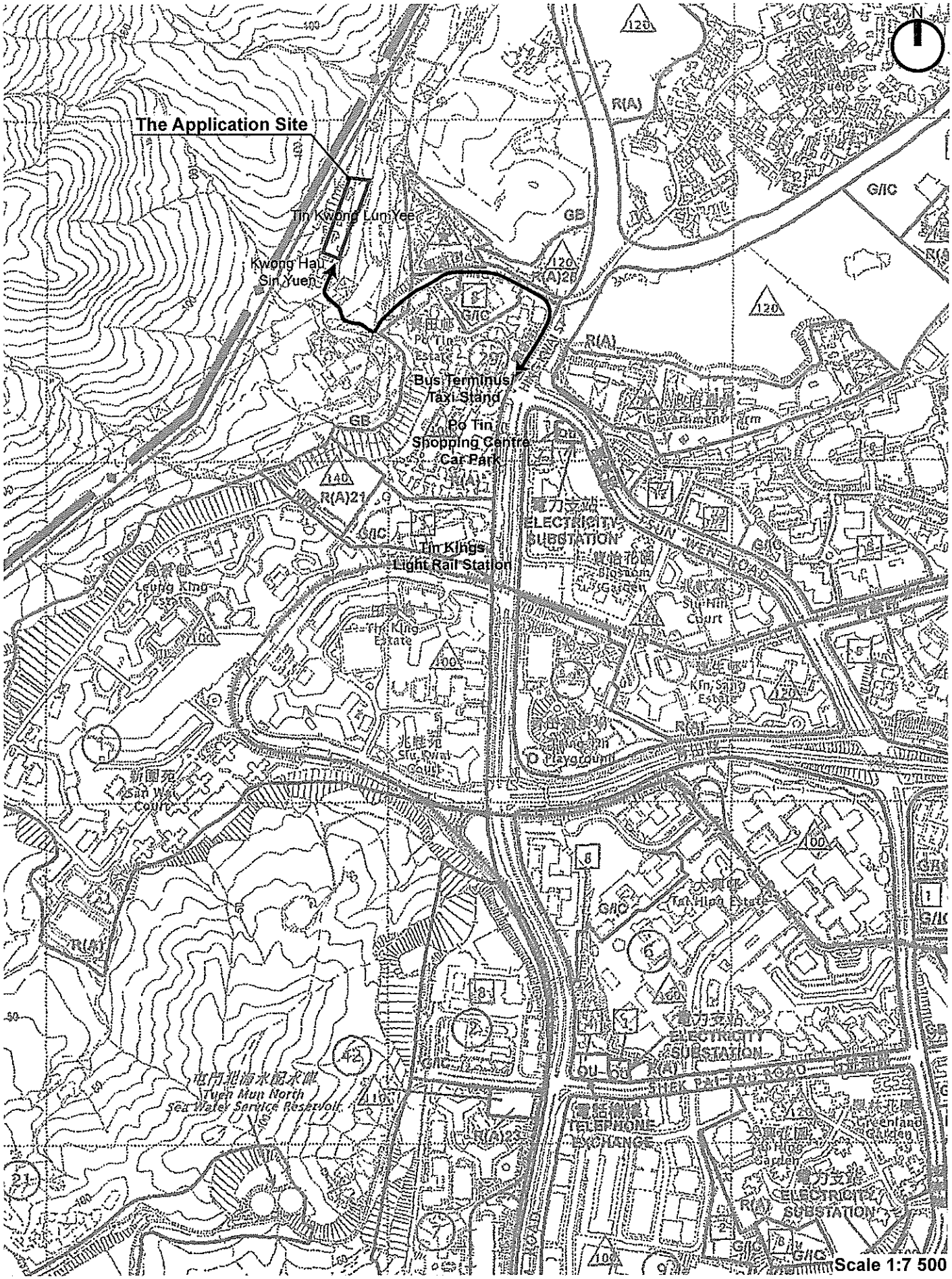
1.1 Purpose of Submission

The rezoning application is submitted by Toco Planning Consultants Ltd. on behalf of Tin Kwong Lun Yee Ltd. (the Applicant), the registered owner of Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744H and 1744I in D.D. 132. It is for the agreement of the Town Planning Board (the Board/ TPB) to amend the zoning of the site covering the above private lots on the Approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35 (see **Plan A**) from "Green Belt" ("GB") zone to "Government, Institution or Community" ("G/IC") zone. The proposed zoning will permit the religious use and the subsequent submission of a section 16 (s.16) planning application for regularising a Pre-cut-off Columbarium within Tin Kwong Lun Yee (TKLY). It covers three 2-storey buildings with a total of 11,094 niches (936 sold niches and 10,158 niches available for sale) before 30.6.2017.

TKLY is a temple dedicated for Lang Yan Sing Gau (能仁聖教), which is a branch of Tibetan Buddhism Vajrayana (藏傳佛教密宗) from the Taiwan stream. Master Yuen Sin Kan, the founder of TKLY, is a recognized "Vajra Acharya" who could give transmission of teaching of Vajrayana and has a religious officiated name of "Lun Yee". He migrated from Taiwan to Hong Kong in 2007 with a vision of spreading the words of Buddha and established the first temple of Lang Yan Sing Gau in Hong Kong at the application site – Tin Kwong Lun Yee. TKLY is dedicated to provide training and coaching to members who have to realize the Buddha's teaching in their daily life and to benefit all sentient beings. It is also committed to provide social services by volunteering and offering assistance as needed to organisations. When the founder of TKLY reached an advanced age, his followers have assumed the management responsibility of the temple.

The application site has been operated as a religious institution with columbarium facility since 2009. The Private Columbaria Ordinance (PCO) came into effect on 30.6.2017 and the private columbarium in Hong Kong must be covered with Columbarium Licence, Exemption or Temporary Suspension of Liability (TSOL). The Government has emphasised in many public occasions that they need to adopt a pragmatic and sensitive approach to resolve properly the historic problems of Pre-cut-off Columbarium in order to minimise any social disruption arising from people who have purchased these niches and massive displacement of interred ashes before the introduction of regulatory regime (see **Appendix I**).

An application for Columbarium Licence and an application for TSOL for Pre-cut-off Columbarium in TKLY were submitted by the Applicant to the Private Columbaria Licensing Board (PCLB) on 8.2.2018 (see **Appendix II**). During the 3 years of the validity period, the Applicant has to comply with all statutory and government requirements, including town planning, land lease and building safety. Hence, the present application is submitted.



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Plan A: Zoning and Location Plan

Extract of Approved Tuen Mun Outline Zoning Plan No. S/TM/35

1.2 The Proposed Scheme

The proposed scheme has been prepared to comply with the licensing process and requirements. A series of traffic and environmental improvement measures have been proposed and they are summarized as follows:-

(a) Traffic and Crowd Management Mitigation Measures
Car parking and loading/ unloading facilities will be provided at the site. A road improvement proposal has been proposed between TKLY and Hing Fu Street Roundabout. A Management Plan with shuttle bus service has been prepared to minimize the traffic impact during the grave-sweeping seasons.

(b) Maintaining Good Relationship with the adjoining Religious Institution
The access road connecting the site and Hing Fu Street falls partly within the adjoining private lots which are owned by the operator of Filial Praise Niches (HK) Ltd. (Kwong Hau Sin Yuen/ KHSY/ 光孝仙苑). TKLY has maintained a good relationship with KHSY and they have signed an agreement with legal effect on the widening and shared use of the access road (see **Appendix III**).

(c) Landscape and Environmental Improvement Measures
A planting strip has been proposed along the south-western side of the site to minimise the potential visual impact to the locality. Burning of ritual paper will be prohibited within the site.

Planning and technical assessments have indicated that the present application is well justified based on the following reasons:-

(a) the application is aimed at regularising the existing niches from a Pre-cut-off Columbarium ancillary to TKLY. It is in line with the requirements of the PCO;
(b) the proposed development is in line with the Government's intention to relieve part of the urgent demand for columbarium niche spaces in Hong Kong;
(c) the application site is no longer suitable for residential use and it was abandoned for more than 20 years due to the construction of power pylons and overhead power lines across the site in the 1980s;
(d) the application site situated on a slope in a linear orientation is an ideal location for Tibetan Buddhist Temple;
(e) it is accessible by vehicles and is within walking distance to the bus terminus and public car park in Po Tin Estate;
(f) the existing buildings at the site are low-rise in nature and they are segregated from residential use by slope with mature trees and power pylons;
(g) the applied uses are compatible with the adjacent land uses since the site is abutting a religious institution with columbarium use and is surrounded by graves;
(h) the small scale development will unlikely result in any significant land use, traffic, environmental, sewerage, visual, and landscape impacts; and
(i) the application will not set an undesirable precedent for similar applications in view of its religious background, site suitability, scale and the new policy initiatives.

The above planning justifications will be explained in detail in the following sections. Details of various technical assessments are attached in **Appendices IV** to **VIII**.

2. PLANNING BACKGROUND

The location, existing site condition, adjacent land uses and land status of the application site will be presented in this section. An examination on the local transportation network and environmental conditions will also be carried out.

2.1 Site Location and Accessibility (Plan A)

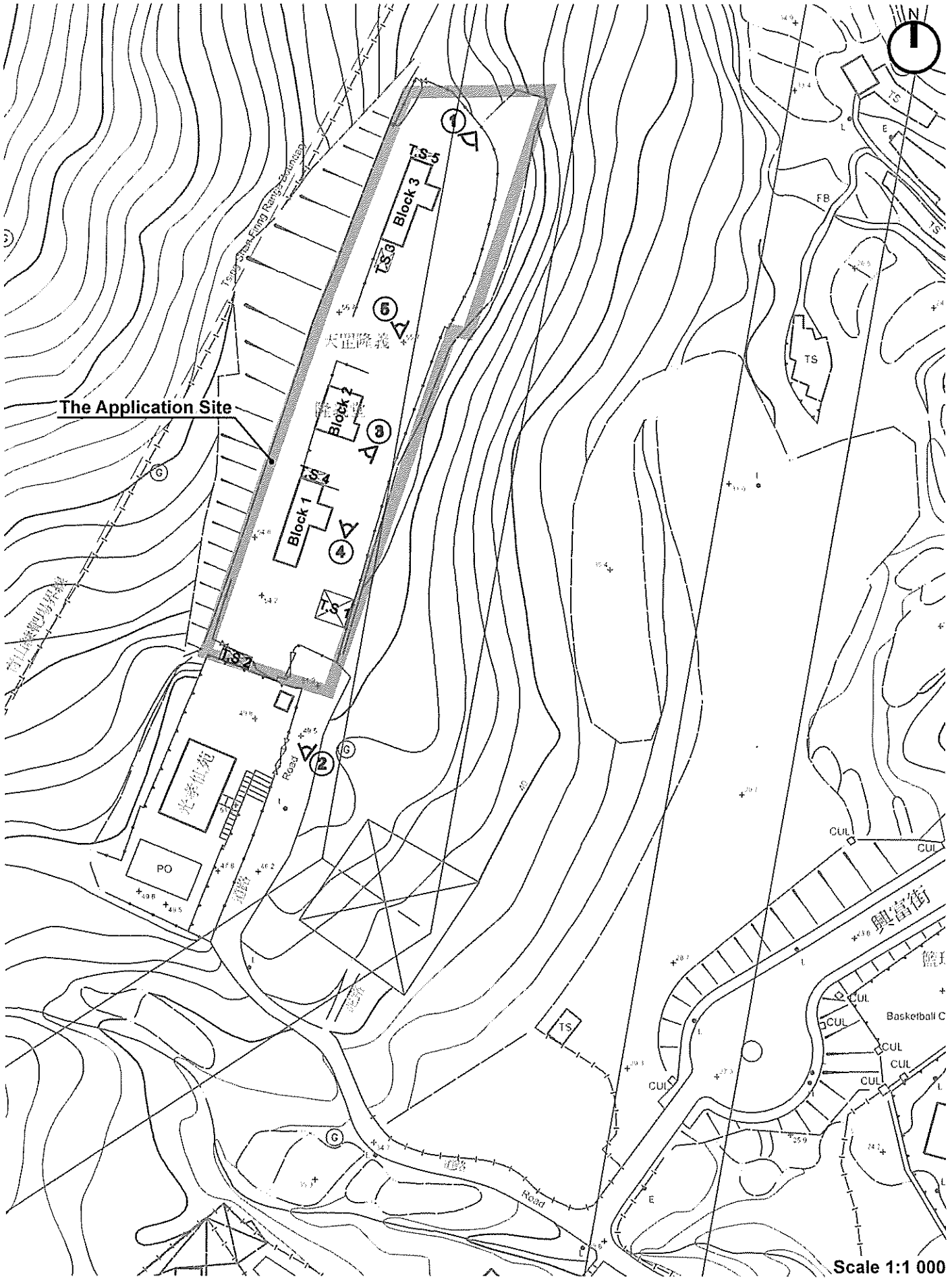
The application site, named Tin Kwong Lun Yee, is located on a platform at the hill slope in the north-western fringe of Tuen Mun New Town. It is bounded by a religious institution with columbarium use called Kwong Hau Sin Yuen to the south and slopes with mature trees on the other three sides. The site is sandwiched between the Tsing Shan Firing Range to its northwest and the CLP's 400kV overhead power lines to its southeast. Because of the difference in altitude and distance and the visual obstructions surrounding the site, the small buildings in TKLY is hardly visible from outside.

The application site is accessible by vehicle from its south via an unnamed access road (about 3 to 4m in width) linking to the Hing Fu Street roundabout. Hing Fu Street is a local road connecting Ming Kun Road, which is a local distributor feeding into Tsing Tin Road where vehicles have direct access to Tuen Mun Highway. There are various public car parks that are within distance of the site, including Po Tin Shopping Centre Car Park and open air car parks in Hing Fu Street (**Photo 8**). Drop-off spaces are available in Hing Fu Street near Po Leung Kuk Horizon East Primary School (**Photo 9**).

In terms of public transport facilities, there is a bus terminus with major bus stops, green minibus (GMB) stops, taxi stand at the eastern edge of Po Tin Estate (**Photo 10**). Tin King light rail transit (LRT) station is located adjacent to Po Tin Estate to its south. These facilities are within a 500-radius catchment area from the site (about 10 minutes walking distance).

2.2 Site Condition (Plan B)

The application site is about 3,137m^2 in area and is hard paved and occupied by three 2-storey building blocks for religious and columbarium uses (**Photo 1**). Block 1, namely 黃庭堂 at G/F and 玄武堂 at 1/F, is located near the site entrance (**Photo 3**). Block 2, namely 地殿堂 at G/F and 天宮堂 at 1/F, is situated at the centre of the site (**Photo 4**). Block 3, currently named as 信眾靈修研習處, is located at the northern end of the site. These buildings were built in 1960s under building licences, long before the gazette of the first Draft Tuen Mun OZP in 1983. A temporary structure for office use is located at the south of the site next to the site entrance. Another temporary structure near the site entrance has been used for guard house/ staff quarter. A temporary structure for storage use is located adjacent to Building C (**Photo 5**). Small structures for toilet use can be found at the north-eastern side of Block 1 and Block 3.



TOCO

Plan B: Site Plan

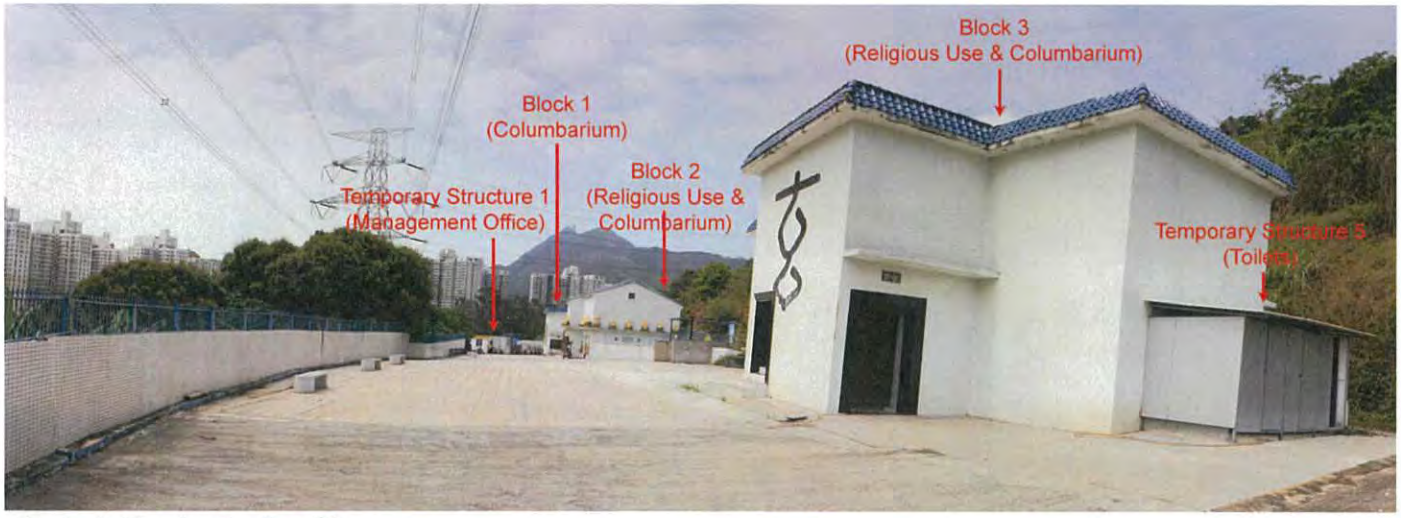


Photo 1: The Application Site



Photo 2: Entrance of the Site



Photo 3: Block 1 (黃庭堂 at G/F and 玄武堂 at 1/F)



Photo 4: Block 2 (地殿堂 at G/F and 天宮堂 at 1/F)



Photo 5: Block 3 (信眾靈修研習處)

TOCO

Site Photos

An ingress/egress vehicular access point with a width of 5m is located at the southern corner of the site connecting to the unnamed access road. Currently, car parking and loading/unloading activities are mainly confined around the site entrance. The site is partly underneath the overhead power lines, which has rendered the site not suitable for residential use. It is located on a flat platform with a height of 54mPD, which is well above the adjacent land uses mostly at 20mPD.

2.3 Adjacent Land Uses (Plan C)

The application site is zoned "GB" on the Approved Tuen Mun OZP No. S/TM/35 and is predominantly covered with hill slopes, mature trees, burial ground and institutional use. Adjacent land uses of the site are as follows:-

(a) North – To its immediate north is a well vegetated slope separating the site from a large burial ground and a power pylon.

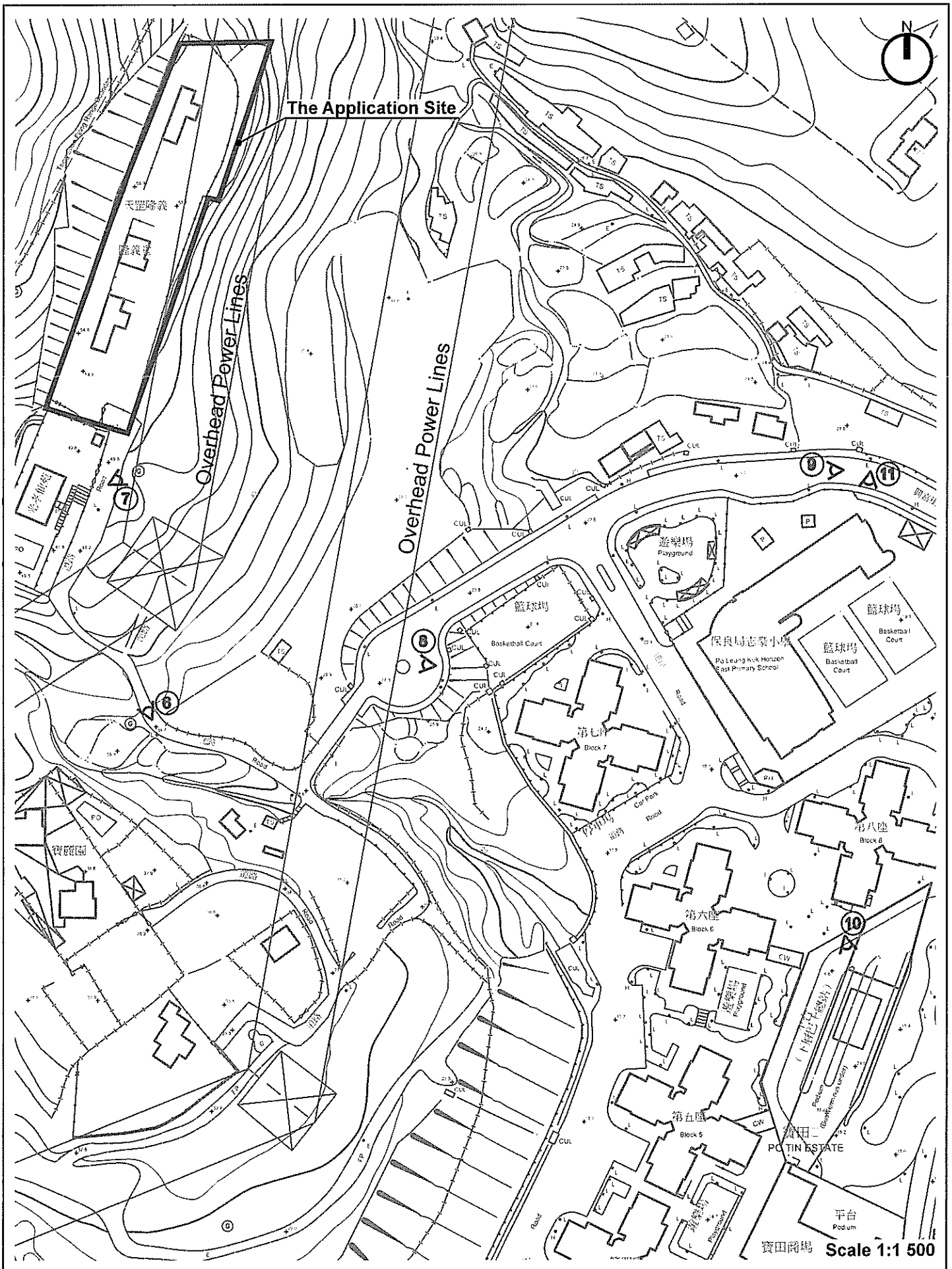
(b) East – To its east is hill slope with vegetation, overhead power lines, an orchard and a vehicle park. Further to the southeast across Hing Fu Street is the Po Tin Estate which comprises interim housing, school, playgrounds, shopping centre, bus terminus and car park (**Photo 11**). A light rail stop is located further south adjoining Po Tin Estate.

(c) South – To its immediate south is a religious institution and columbarium named Kwong Hau Sin Yuen (**Photo 6**). In front of Kwong Hau Sin Yuen is the unnamed access road, power pylon and grave (**Photo 7**).

(d) West – To its west is hill slope and the Tsing Shan Firing range.

2.4 Land Status (Plan D)

The application site comprises 7 private lots namely 1744 S.A, S.B, S.C, S.F, S.G, S.H and S.I all in D.D. 132. They are entirely owned by Tin Kwong Lun Yee Ltd. – the Applicant. Except S.A, S.B and S.C in which each of them is subject to a building licence, the remaining lots are Orchard Lots. A lease modification/land exchange application will be submitted to the Lands Department to rectify the land use of the site after the subsequent s.16 planning application is approved by the Board.



TOCO

Plan C: Adjacant Land Uses Plan



Photo 6: Access road leading to the site



Photo 7: Grave near the site



Photo 8: Hing Fu Street Roundabout



Photo 9: Hing Fu Street



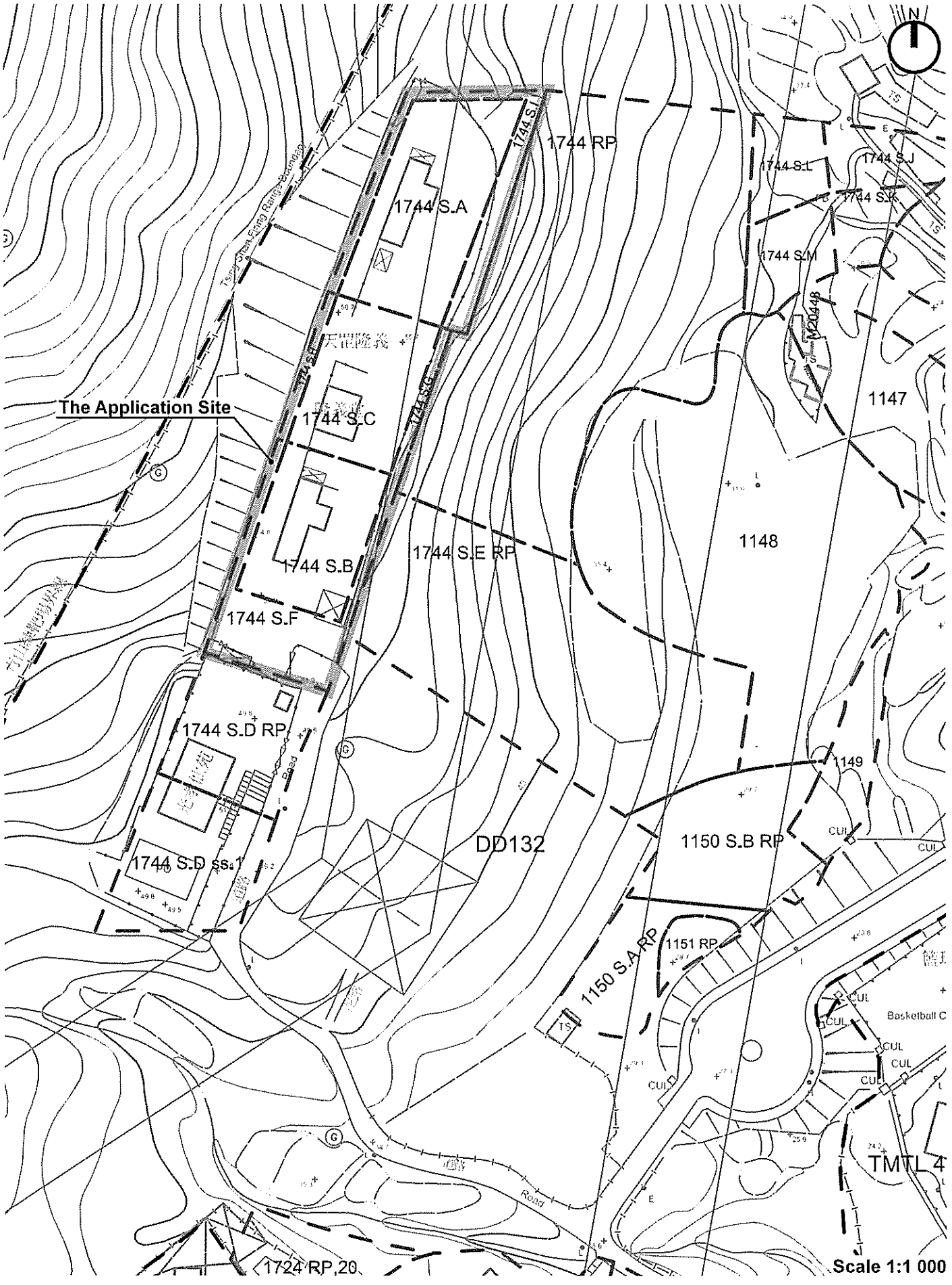
Photo 10: Bus terminus under Po Tin Estate



Photo 11: G/IC facilities in Hing Fu Street

TOCO

Site Photos (2)



TOCO

Plan D: Land Status Plan

3. REZONING PROPOSAL

The application proposes to rezone the application site in TKLY from "GB" to "G/IC" on the Approved Tuen Mun OZP. to the proposed zoning will permit the subsequent submission of a s.16 planning application for regularisation of the religious institution and Pre-cut-off Columbarium within TKLY.

3.1 Proposed Amendments to the Outline Zoning Plan

The rezoning application involves the following amendments to the Approved Tuen Mun OZP No. S/TM/35:-

- To rezone Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744H & 1744I in D.D. 132 from "GB" to "G/IC" zone, with religious institution listed under column 1 and columbarium listed under column 2. The proposed zoning will permit the religious use and the submission of a s.16 planning application for regularising a Pre-cut-off Columbarium within TKLY.

- To impose a building height restriction of 2 storeys for the proposed "G/IC" zone.

The proposed OZP amendments and the schedule of uses for "G/IC" zone are shown in **Plan E** and **Table 3.1** respectively. The proposed "G/IC" zoning will allow the relevant government departments to properly control the number of niches, development intensity, facilities provision, layout of the proposed scheme by approval conditions of s.16 planning application and lease modification.

3.2 Basis of the Proposed Rezoning

The application is strongly justified for rezoning the site from "GB" to "G/IC" zone for the provision of columbarium use under column 2 based on the following reasons:-

(i) <u>The Government's Intention to Resolve the Historic Problems</u>

The Government has emphasised in many public occasions that they are prepared to adopt a pragmatic and sensitive approach to resolve properly the historic problem of these Pre-cut-off Columbaria in order to minimise any social disruption arising from people who have purchased these niches and massive displacement of interred ashes before the introduction of regulatory regime. In contemplating these policy initiatives, the Government would take into account the overall interests of the community so as to avoid affecting the descendants, in particular their wish not to disturb the interred ashes of the deceased as far as practicable (see **Appendix I**).

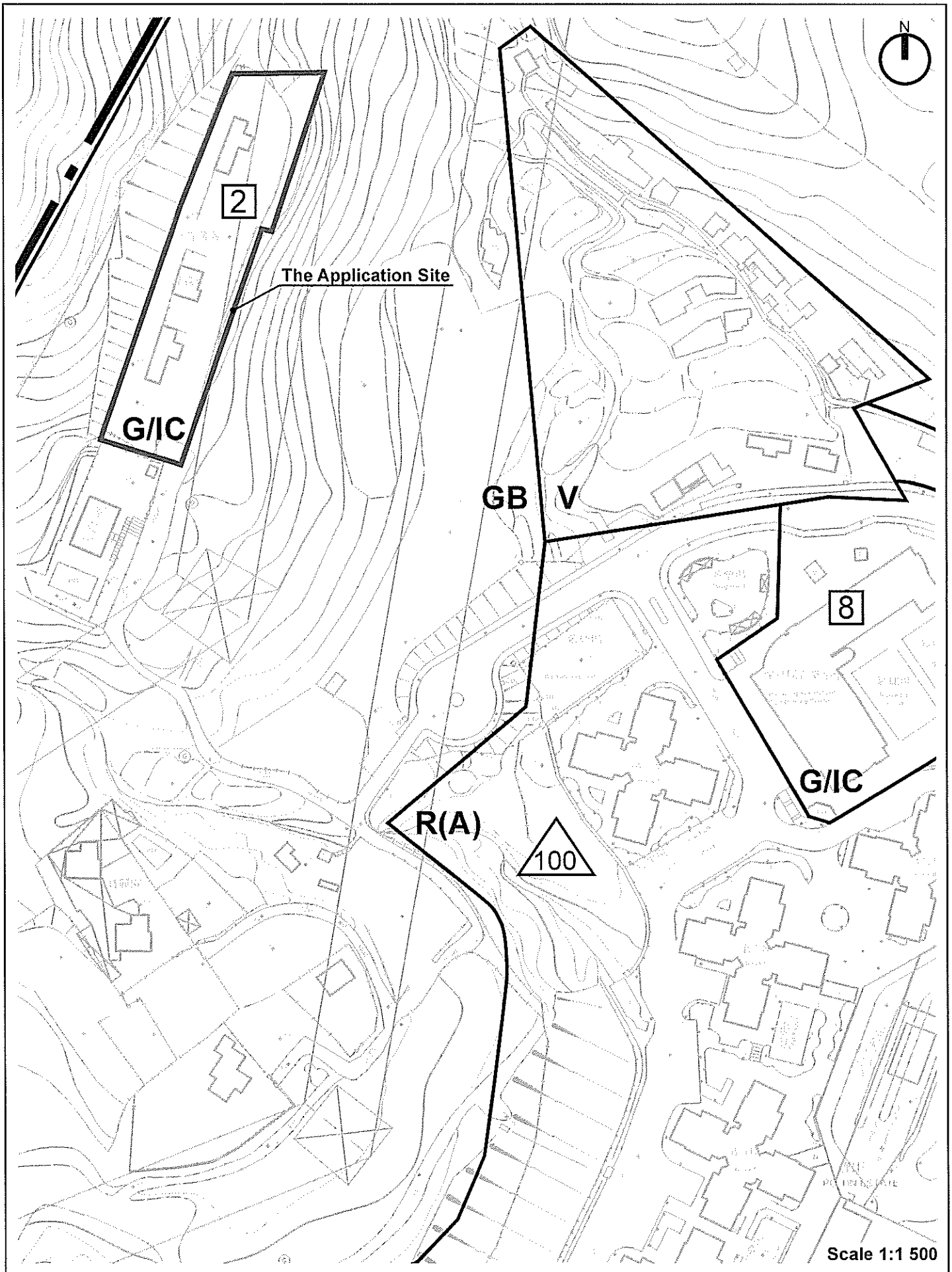
On 30.6.2017, the PCO came into effect and the operator of a private columbarium in Hong Kong must cover a Columbarium Licence, Exemption or

TSOL. The policy objectives aim at stipulating proper regulation on private columbaria so that they could complement the public columbaria to meet the social needs for ancestral worshipping, to add supply and choice of niches and related services. As such, the Applicant had submitted an application for Columbarium Licence and an application for TSOL for a Pre-cut-off Columbarium in TKLY before the expiry date on 29.3.2018 (see **Appendix II**).

(ii) Necessary Steps for the Columbarium Licensing Application

In order to obtain the Columbarium Licence, the Applicant has to comply with all statutory and government requirements, including town planning, land lease and building safety, within the 3 years of the validity period of TSOL. Since TKLY is not an "existing use" under the planning regulation, and the application site is zoned "GB" which only allows an existing religious institution to apply for columbarium use under s.16 planning application, the Applicant has to submit a s.12A rezoning application to amend the zoning of the site to "G/IC" with "Columbarium" listed under column 2. Then the Applicant could submit a s.16 planning application for columbarium use so as to in compliance with the town planning requirements. Hence, the present rezoning application is submitted for TPB's approval.

The proposed rezoning is an essential mechanism to facilitate regularization of the columbarium ancillary to TKLY. It is in line with the government's intention to take care of the sentiment of the descendants, in particular their wish not to upset the resting place of the deceased as far as practicable. Planning justifications on the background of TKLY, site suitability, planning intention, merits of the proposed scheme, technical assessments and precedent case will be presented in detail in **Section 5**.



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Plan E: Proposed Amendment to the Tuen Mun OZP

Table 3.1 Schedule of Uses for "G/IC" Zone

GOVERNMENT, INSTITUTION OR COMMUNITY

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot	Animal Boarding Establishment
Animal Quarantine Centre (in Government building only)	Animal Quarantine Centre (not elsewhere specified)
Broadcasting, Television and/or Film Studio	Columbarium
Cable Car Route and Terminal Building	Correctional Institution
Eating Place (Canteen, Cooked Food Centre only)	Crematorium
Educational Institution	Driving School
Exhibition or Convention Hall	Eating Place (not elsewhere specified)
Field Study/ Education/ Visitor Centre	Firing Range
Government Refuse Collection Point	Flat
Government Use (not elsewhere specified)	Funeral Facility
Hospital	Helicopter Fueling Station
Institutional Use (not elsewhere specified)	Helicopter Landing Pad
Library	Holiday Camp
Market	Hotel
Pier	House
Place of Recreation, Sports or Culture	Marine Fueling Station
Public Clinic	Off-course Betting Centre
Public Convenience	Office
Public Transport Terminus or Station	Petrol Filling Station
Public Utility Installation	Place of Entertainment
Public Vehicle Park (excluding container vehicle)	Private Club
Recyclable Collection Centre	Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation
Religious Institution	Refuse Disposal Installation (Refuse Transfer Station only)
Research, Design and Development Centre	Residential Institution
Rural Committee/ Village Office	Sewage Treatment/ Screening Plant
School	Shop and Services
Service Reservoir	Utility Installation for Private Project
Social Welfare Facility	Zoo
Training Centre	
Wholesale Trade	

Planning Intention

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

Remarks

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

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

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

(d) Under exceptional circumstances, for developments and/or redevelopments, minor relaxation of the non-building area restrictions as shown on the Plan may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

4. DEVELOPMENT PROPOSAL

The primary objective of the development scheme in support of the rezoning request is to comply with the requirements of the PCO for proper control of a Pre-cut-off Columbarium in TKLY. A series of traffic, landscaping and environmental improvement measures have been proposed to meet the necessary government's requirements.

4.1 Master Layout Plan and Development Schedule

4.1.1 Master Layout Plan

A Master Layout Plan and the perspective drawings of TKLY are shown in **Plan F** and **Plan G** respectively. The proposed scheme mainly involves the retention of existing three 2-storey small buildings and no additional building has been proposed at the site. The temporary structures at the site will be demolished and turned into internal vehicular access, car parks, loading/unloading bays and landscape area. In order to meet the relevant building regulations, a small footbridge has been proposed at first level to link up Block 1 and Block 2 for the share use of the required staircases and the pedestrian access ramp for disabled. Similarly, a staircase and pedestrian access ramp is proposed at the back of Block 3. Elevations and sections of the buildings in **Plan H** and **Plan I** illustrate that the existing buildings to be retained at the site are low-rise in nature and are generally compatible with the surrounding environment.

Internal layouts of the buildings for each floor are shown in **Plan J** to **Plan L**. The three building blocks were built in 1960s and have not been demolished or re-built, but have been renovated in 2009 for religious use. The present application is intended to regularise the existing columbarium niches as at 30.6.2017 within the three buildings. Currently, Block 1 and Block 2 are occupied by columbarium use and Block 3 is sharely used for columbarium and religious uses. In order to meeting the PCO's requirement, the proposed scheme will retain the ash interment layout as at the cut-off-time (i.e. 18.6.2014). The vacant space in ground level of Block 2 will be converted into a management office and toilet. Adequate spaces have been reserved inside and outside the buildings to facilitate the visitors of TKLY to worship Buddha and their ancestors. Fire fighting facilities will be provided for the buildings to ensure fire safely.

4.1.2 Architectural Design Statement

The proposed master layout plan has incorporated features that are complementary to the columbarium development, namely:-

1. A pedestrian zone to connect the main entrance to different blocks and allow visitors to walk pleasantly during the visit, which would also benefit the visitors who come to conduct the traditional memorials and ancestor rites;

2. A few ramps with gentle slope to connect the ground floor to the upper floor. The availability of ramps greatly improves the mobility and participation opportunities of the elderly, people with disabilities and adults with young children; and

3. An Emergency Vehicle Access (EVA), in front of the existing buildings, to allow fire appliances to enter the fire scene without obstruction. The width of the EVA is 7.3m and can serve at least one major facade of the buildings.

4.1.3 Development Schedule

The development schedule of the proposed scheme and the planning parameters of the proposed facilities are shown in **Table 4.1** and **Table 4.2** respectively. The ash interment layout inside the three blocks in TKLY will remain the same as of 30.6.2017 and niche count for TKLY on 30.6.2017 which was submitted as part of the Columbarium Licence and TSOL applications to PCLB is shown in **Table 4.3**.

Table 4.1: Development Schedule of the Proposed Development

	Application Site
Site Area (m^2)	About 3,137m^2
Plot Ratio	0.155 (approximate)
Proposed GFA (m^2)	About 489.16m^2
Site Coverage	7.816% (approximate)
No. of Block(s)	3
Maximum Building Height	2 storeys (about 7m)
No. of niche(s)	11,094 niches
No. of car parking spaces(s)	10 spaces for visitors (including 2 disabled parking)
No. of Lay-by(s)	4 bays for shuttle bus

Table 4.2: Planning Parameters of the Proposed Facilities

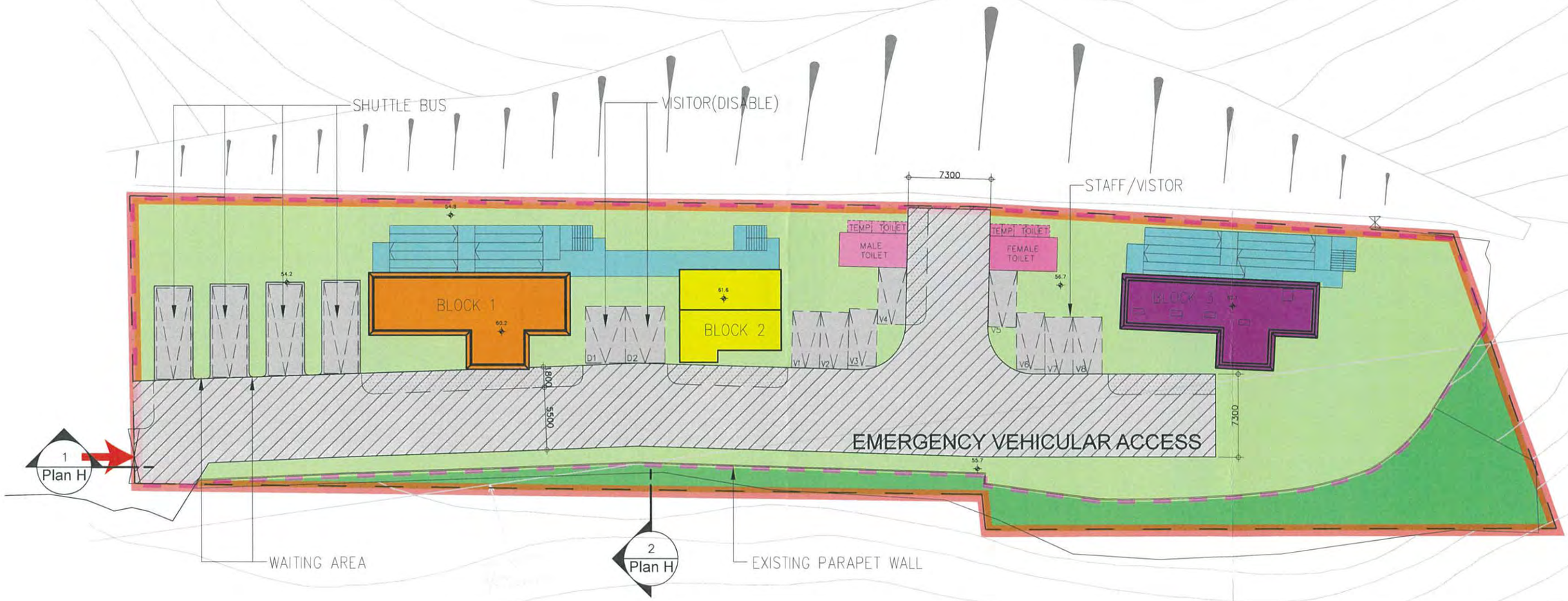
Building	Building Height	Level	Facilities	G.F.A.
Block 1	7m	G/F	• Columbarium	84.010m^2
			• Staircase + store room	8.811m^2
		1/F	• Columbarium	86.500m^2
			• Staircase	6.321m^2
Block 2	7m	G/F	• Columbarium	40.678m^2
			• Management office	5.470m^2
			• Toilet for disabled and staff	6.721m^2
			• Staircase, circulation space + store room	13.064m^2
		1/F	• Columbarium	61.470m^2
			• Staircase	4.463m^2
Block 3	7m	G/F	• Columbarium and Religious use	80.011m^2
			• Staircase	5.815m^2
		1/F	• Columbarium and Religious use	79.556m^2
			• Staircase	6.270m^2
			Total	**489.160m^2**

Table 4.3: Niche Count at 30.6.2017

Classification		Block 1	Block 2	Block 3	Total
No. of Sold & Occupied Niches	**Single-Urn Niche**	8	0	0	8
	Double-Urn Niche	0	0	0	0
	Family Niche For 4 Members	0	0	0	0
No. of Sold but Not Yet Occupied Niches	**Single-Urn Niche**	928	0	0	928
	Double-Urn Niche	0	0	0	0
	Family Niche For 4 Members	0	0	0	0
No. of Niches Available for Sale	**Single-Urn Niche**	3,413	0	0	3,413
	Double-Urn Niche	0	2,688	3,914	6,602
	Family Niche For 4 Members	0	57	86	143
Total		4,349	2,745	4,000	11,094

Legend

- The application site
- Existing concrete platform within the application site
- Internal access and transport facilities
- Site entrance
- Landscape and Pedestrian circulation area
- Vegetated slope outside the application site
- Columbarium
- Columbarium and management office
- Religious Use and Columbarium
- Temporary Toilet
- Access ramp
- Pedestrian Zone



Scale 1:300

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Plan F: Master Layout Plan

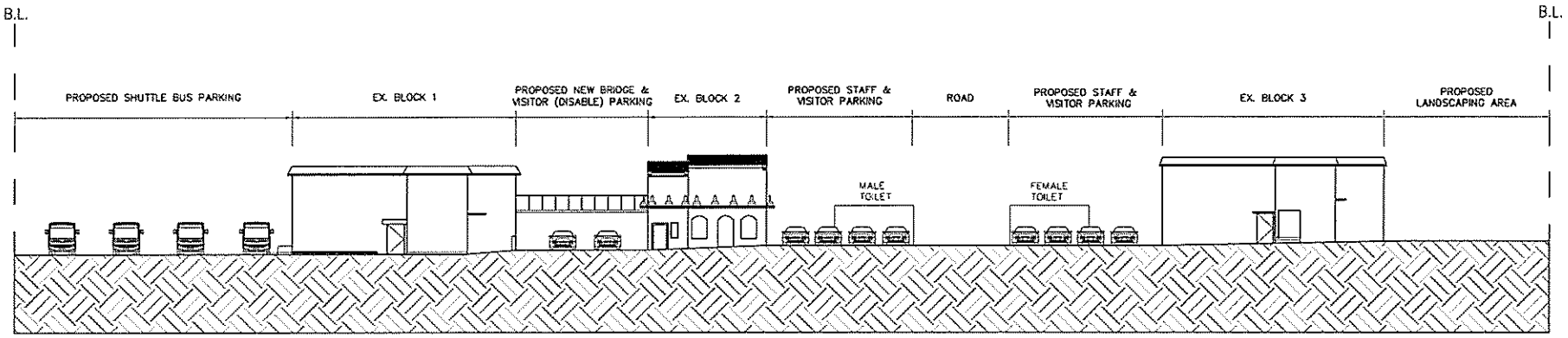




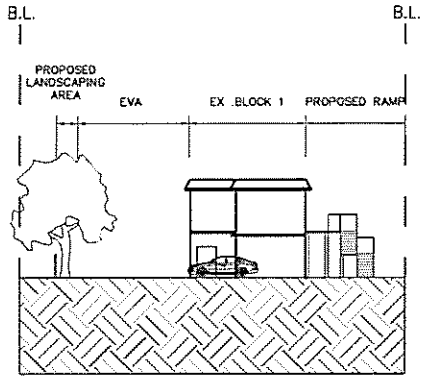
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Plan G: Photomontages

Elevation 1:



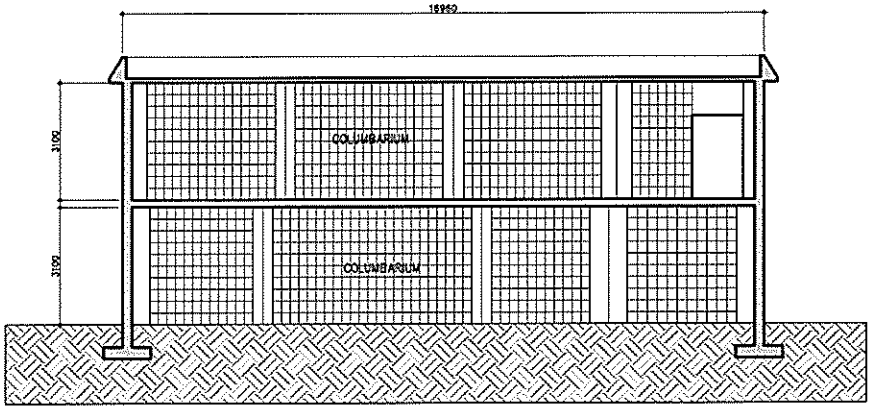
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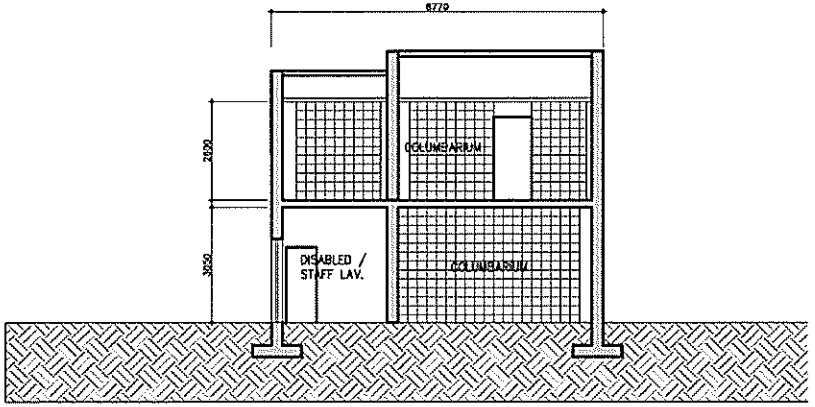
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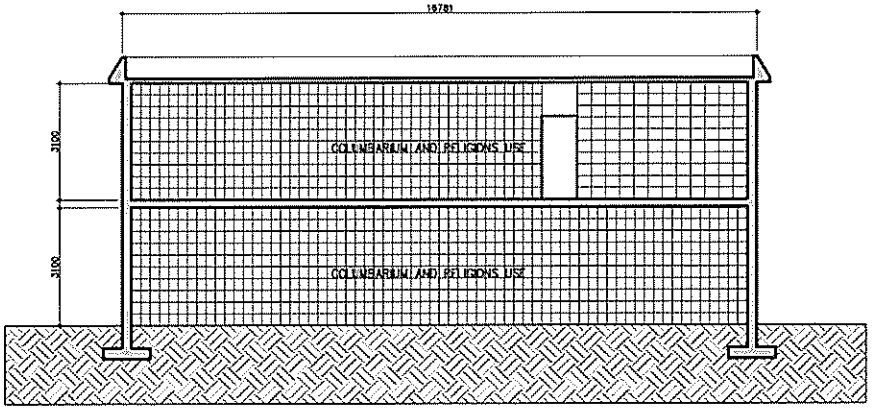
Plan H: Elevation Plan



Section for Block 1



Section for Block 2

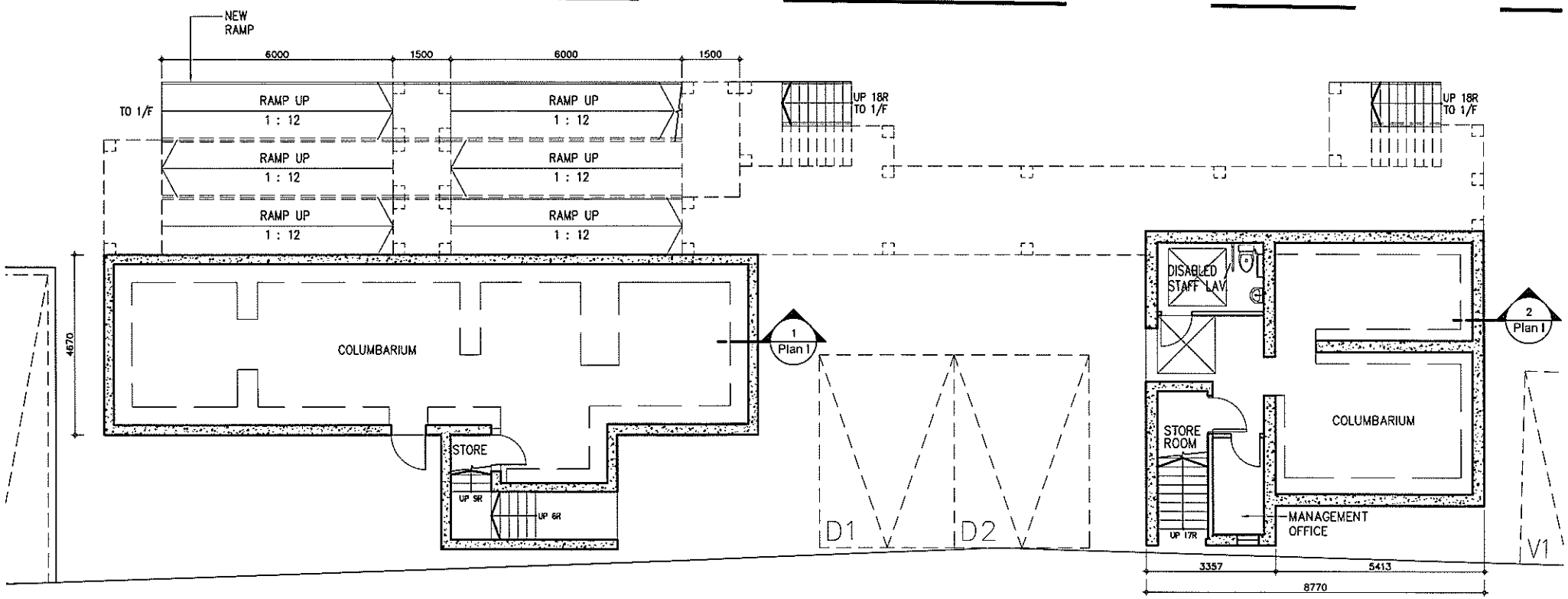


Section for Block 3

Scale 1:200

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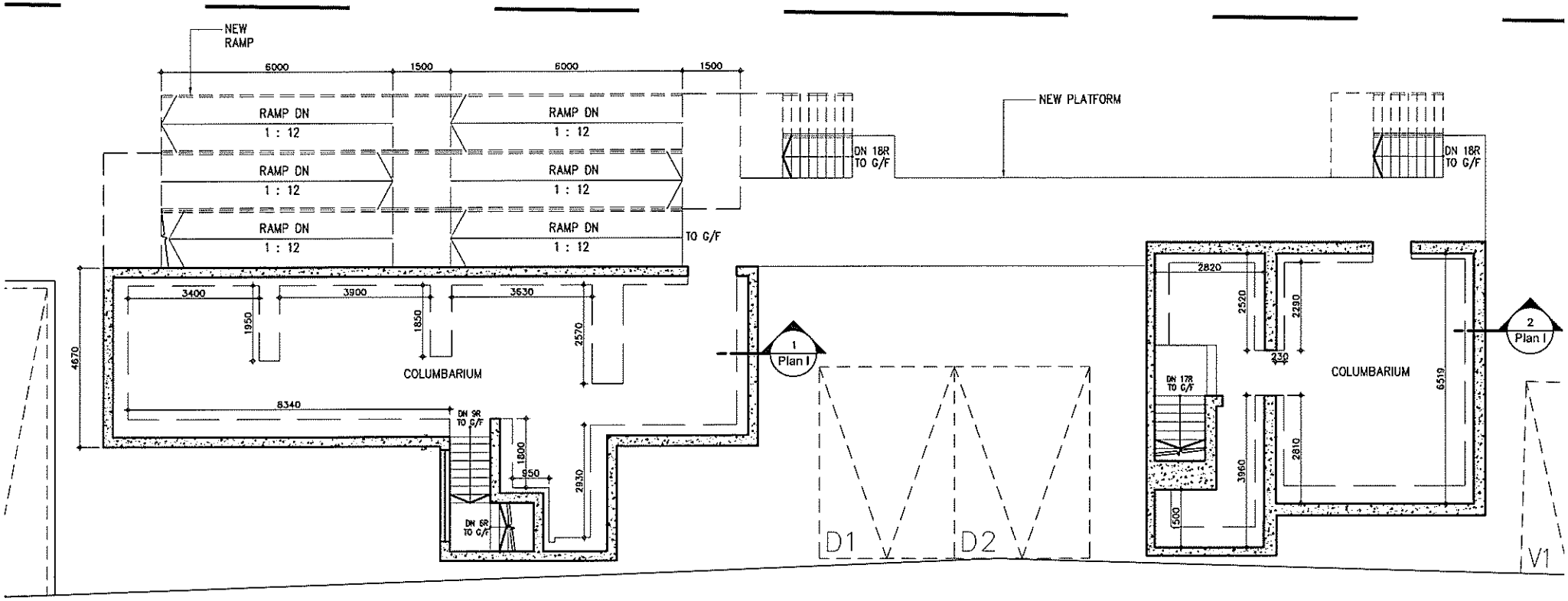
Plan I: Section Plan for Block 1-3



Scale 1:150

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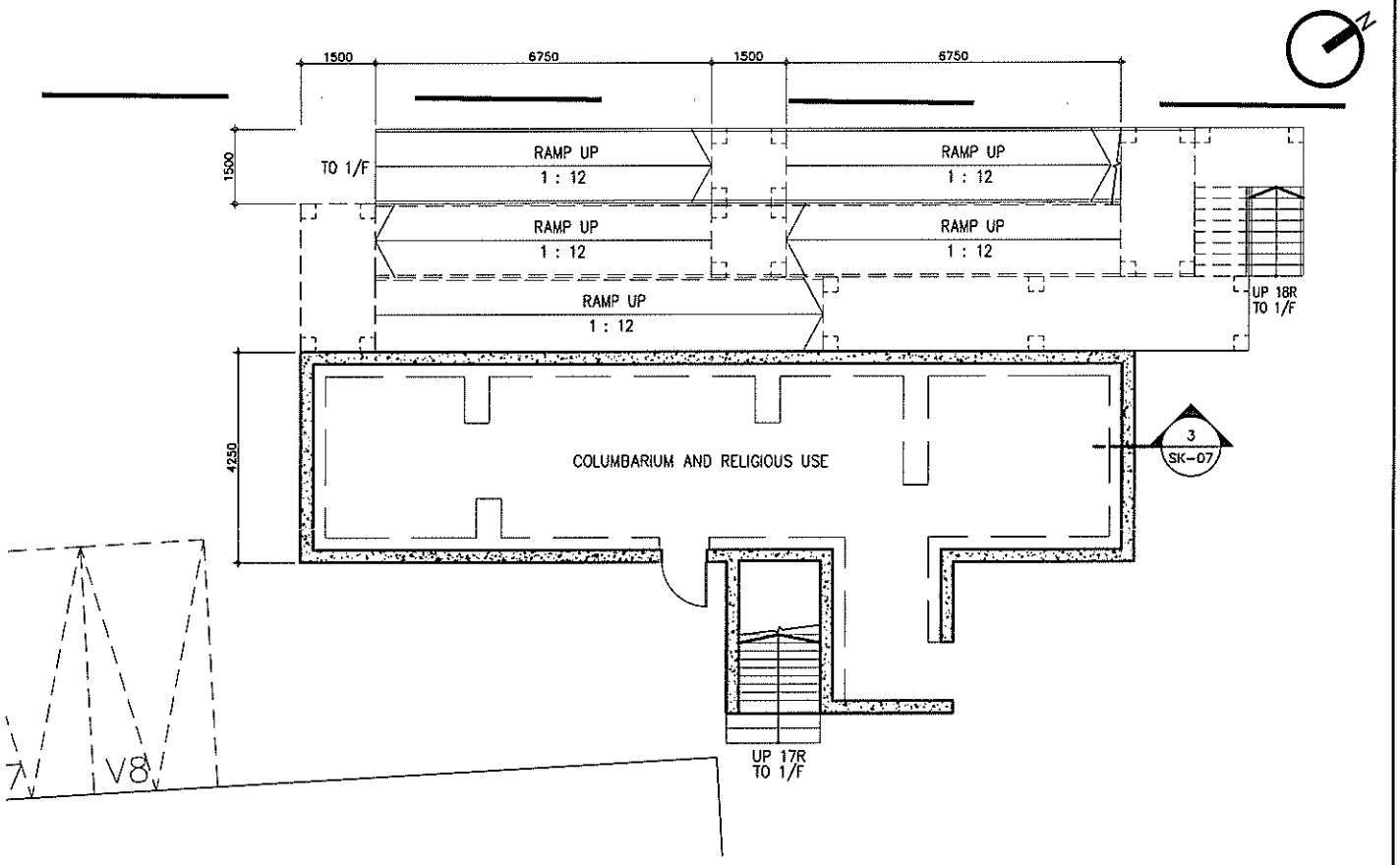
Plan J: Floor Plan for Block 1 and Block 2 (G/F)



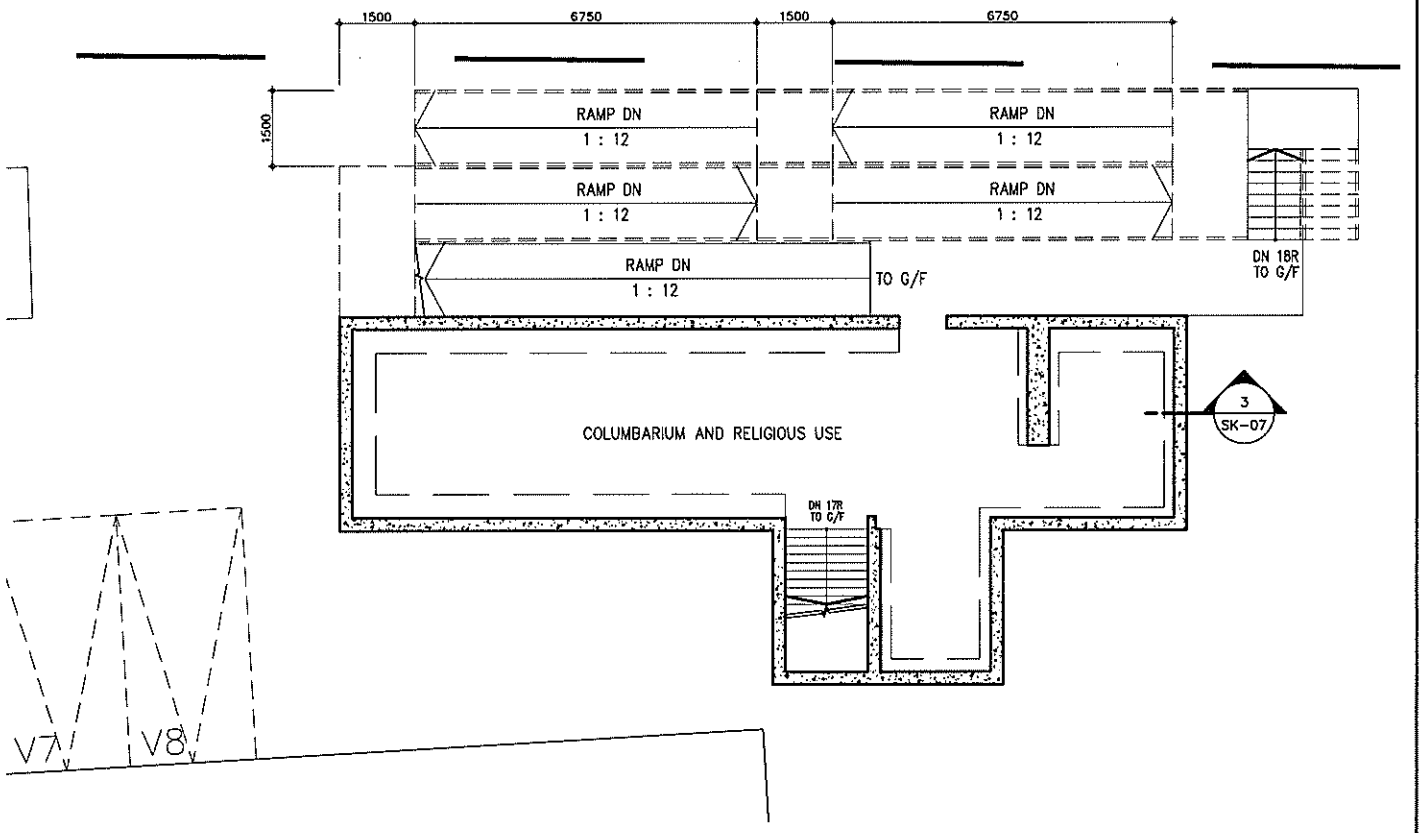
Scale 1:150

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Plan K: Floor Plan for Block 1 and Block 2 (1/F)



Ground Floor



First Floor

Scale 1:150

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Plan L: Floor Plan for Block 3

4.2 Landscape Proposal

Landscape Perspectives and Landscape Master Plan of the proposed scheme are shown in **Plan M** and **Plan N** respectively. The aim of the landscape proposal is to respond to site conditions, building form and function and to provide a quality landscape scheme. The landscape characters of the application site have a typical Chinese temple setting landscape. In order to enhance the proposed scheme to be compatible to the existing rural landscape character, the following landscape design areas are identified within the site:-

(a) Temple Landscape

The site has an area of about 3,137m^2 with three existing low-rise and low-density buildings, which formed the major building component of the whole site. Moving from the south to the north part of the site, a series of spatial landscape gardens are designed in scattered areas. These areas accommodate more passive pursuits such as the proposed lawn and leisure sitting areas. The plantation of these gardens mixed up with various decent shrub and groundcover combination, which provide a good quality and increase the amenity and aesthetic value of the proposed religious and columbarium development.

(b) Barrier Free Access

The landscape design has taken into account of the provisions leading to better and more convenient access and facilities for all its intended users. Design requirements as recommended in "The Design Manual: Barrier Free Access 2008" by Building Department would be followed and incorporated in the landscape design, and make sure all visitors, especially disabled users, can reach their target place with no obstacles.

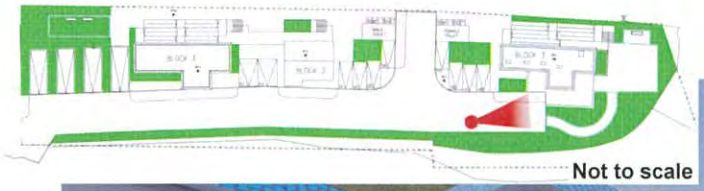
(c) Vegetative Buffering Landscape

In order to provide quality landscape for the proposed development, soft landscape works will be the major landscape element of the landscape proposal. Also, the landscape proposal aims to provide greenery buffering to the eastern periphery, row of mature tree species are introduced (e.g. Cinnamomum burmannii, Delonix regia, Magnolia grandiflora, Michelia x alba).

(d) Proposed Landscape Treatment for the Road Improvement Proposal

There is 9 nos. of trees which are directly conflicted with the road improvement proposal outside the site. In view of the form and amenity value of those trees are low, they are recommended to be felled. With the aim to compensate for those trees to maintain the present greenery scenery, it is recommended to plant 17 nos. of Bauhinia blakeana to the opposite location.

A Landscape Assessment Report for the application site and the road improvement proposal is attached in **Appendix IV**. A total of 24 nos. of trees are proposed within the site. The total landscape area is about 959m^2 which is about 30.6% of the total site area.



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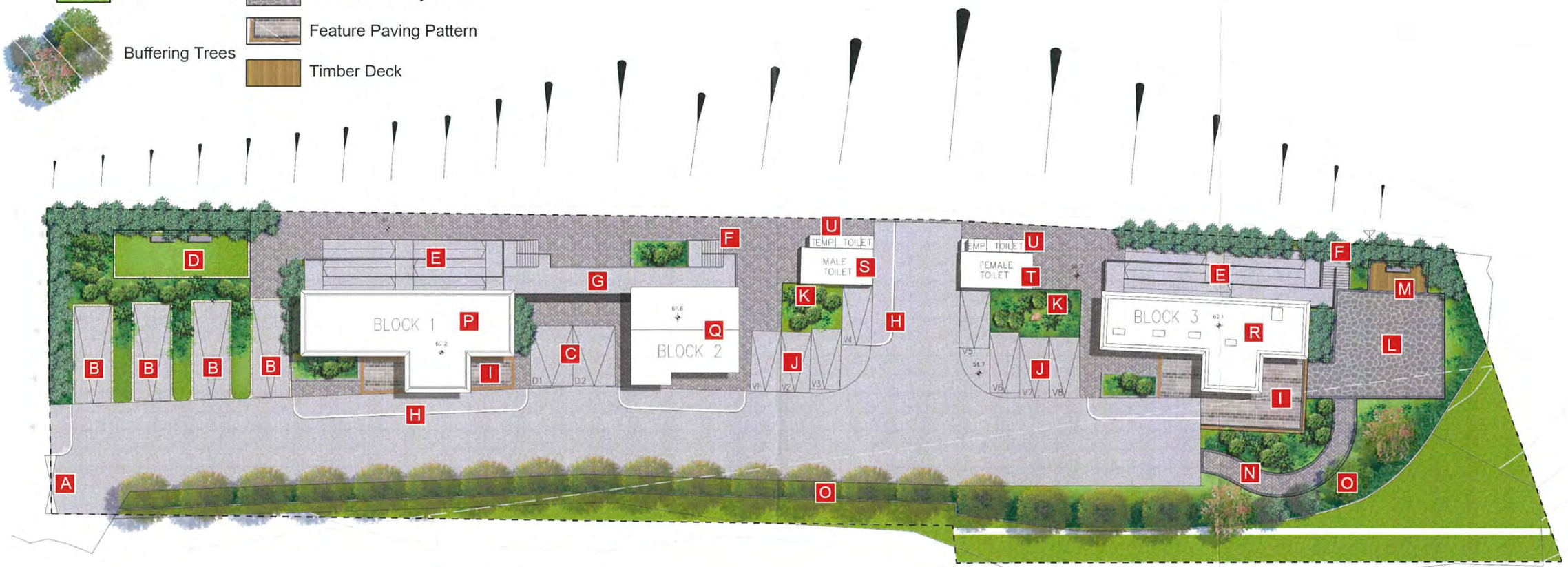
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Plan M: Landscape Perspectives

LEGENDS

- Bamboo
- Shrub & Groundcover
- Lawn
- Buffering Trees
- Concrete Paving
- Conc. Block Paver
- Granite in Crazy Pattern
- Feature Paving Pattern
- Timber Deck



A Application Site Entry
B Shuttle Bus Bays
C Carpark reserved for Visitor (Disabled)
D Open Lawn Area
E Access Ramp to Upper Level
F Staircase to Upper Level
G Upper Level Viewing Terrace
H EVA WITH WHITE LINE MARKING
I Feature Paving to Building Entry
J Carpark reserved for Staff / Visitor
K Leisure Garden
L Multi function Plaza
M Timber Deck (Leisure Area)
N Pedestrian Path
O Buffering Trees Row
P Block 1 - Columbarium
Q Block 2 - Columbarium and management office
R Religious use and Columbarium
S Male Toilet
T Female Toilet
U Container Toilets

Scale 1:400

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Plan N: Landscape Master Plan

4.3 Access Arrangement and Special Traffic Arrangement During Festival Periods

4.3.1 Access Arrangement and Internal Traffic Arrangement

The application site can be accessed via an access road which connects with Hing Fu Street near Kwong Shan Tsuen. Hing Fu Street is a local access road in single-2 lane standards. The road connects with Hing Kwai Street, a local distributor road, for access to other parts of Tuen Mun District via Tsun Wen Road and Ming Kum Road, which are the district distributor roads serving the developments in Tuen Mun North. In terms of public transportation, there are bus, minibus and Light Rail services near the application site. Public transport services in the vicinity of the site are shown in **Plan O**.

As shown in the Master Layout Plan, the proposed internal transport facilities within the proposed development include 2 accessible parking spaces for visitors and 8 private car spaces for staff/ visitors and 4 bays for the proposed shuttle bus service. The private car spaces will be available for staff/ visitors on normal day only. In order to improve the condition of the access road leading to the site, it is proposed to provide two passing bays along the road as shown in **Plan P**.

4.3.2 Special Traffic Arrangement During Festival Periods

During grave sweeping festival periods, management staff will be stationed at key locations to assist pedestrians and motorists as appropriate. A crowd management plan will be implemented as follows:-

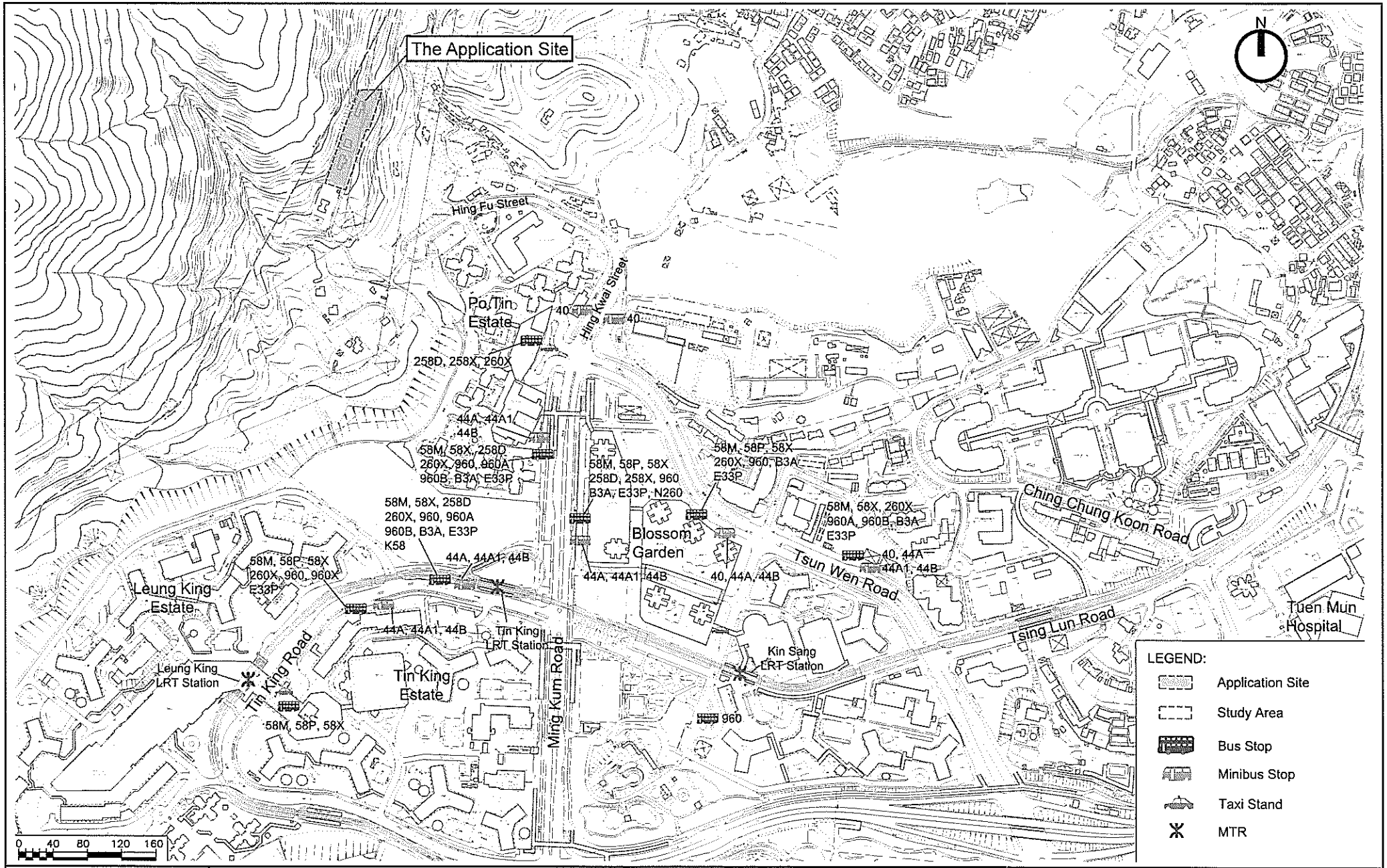
(a) <u>Admission Control</u>

The proposed development is a private property in which only niche owners and their family members with proof of memberships are allowed to enter the columbarium. The purchasers of the niches inside the columbarium are members of the proposed development. Other visitors will only be allowed to access the site when leaded and permitted by the staff of the proposed development.

The sale agreement for the purchase of niche will include a set of House Rules. The House Rules are to regulate the conduct of the visitors in the use of the niches including the information on shuttle bus service, parking and traffic arrangement during Ching Ming and Chung Yeung Festival periods.

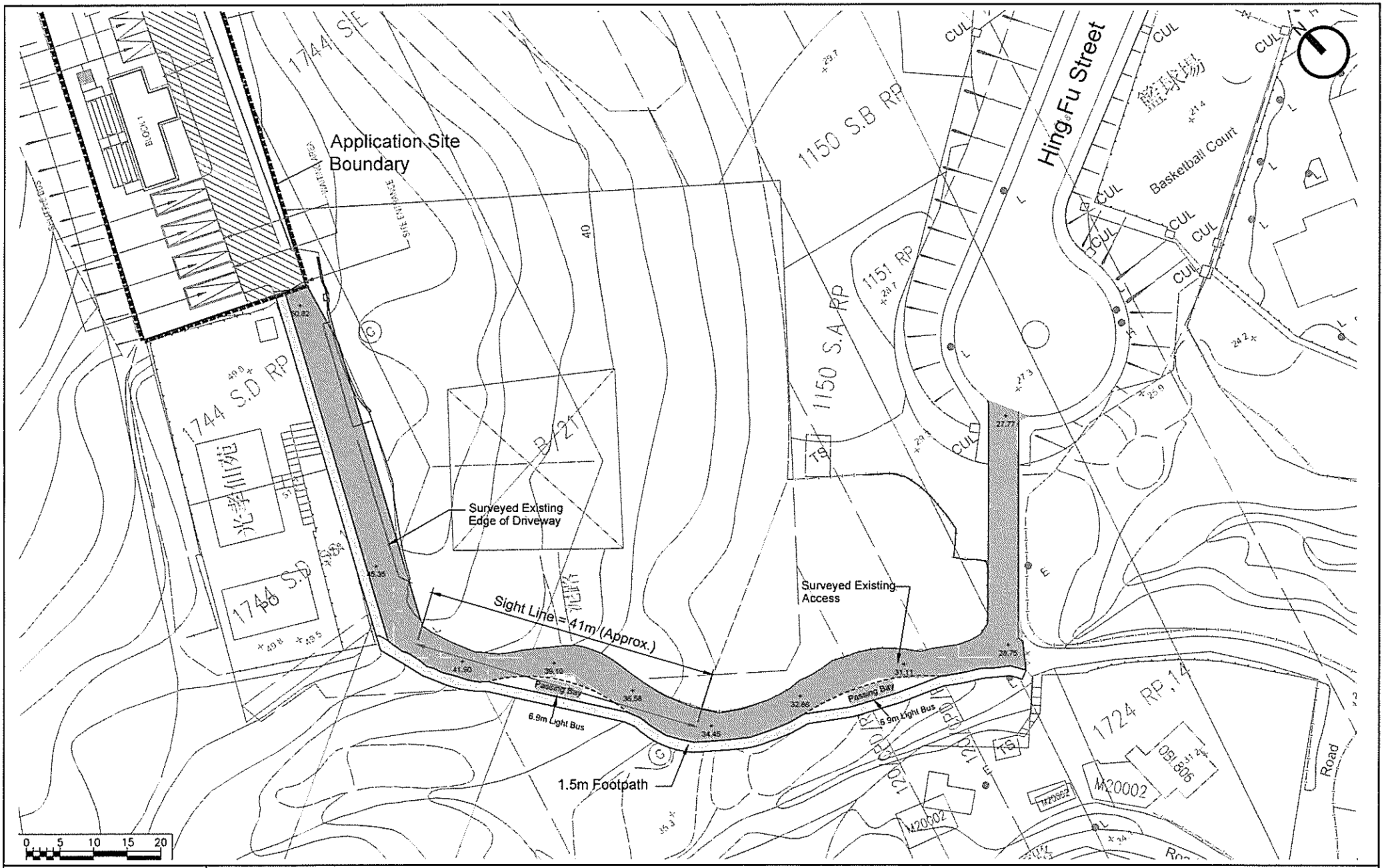
(b) <u>Visit-by-Appointment System</u>

During the Ching Ming and Chung Yeung festival periods (i.e. two weekends immediately before festive days to the weekend after festive days), visit-by-appointment system will be implemented to control the number of visitors entering the columbarium. Booking by telephone, SMS, WhatsApp and Email will be available for all members once the visit-by-appointment system is activated. Each member and his/ her accompanies has to reserve a place via the



OZZO TECHNOLOGY

Plan O: Public Transport Services in the Vicinity of the Site



OZZO TECHNOLOGY

Plan P: Proposed Road Improvement Work

visit-by-appointment system on a first-come first-serve basis prior to their visits to the columbarium.

(c) Proposed Shuttle Bus Services

To minimise the amount of vehicular traffic and in line with the government policy to encourage public transport use with railway as the backbone, the Applicant proposes to provide the free bus services for visitors from Siu Hong MTR Station to the application site during grave sweeping festival periods (see **Plan Q**).

(d) Crowd Management within TKLY

Security/ management staff for both within the columbarium and at the layby in Siu Hong MTR Station, will be deployed. The management staff/ security guards to be stationed within the site will assist members to undertake the worship activities in a safe and orderly manner. The management staff/ security guards to be stationed at the general lay-by in Siu Hong MTR Station will regulate and control passenger queuing at the lay-by and only visitors with valid proof of booking confirmation could be allowed to use the free shuttle bus service.

A Traffic Impact Assessment with detailed traffic surveys and special traffic arrangements has been prepared as attached in **Appendix V**. In order to facilitate proper traffic management for the columbarium in TKLY, a Management Plan has been prepared as attached in **Appendix VI**.

4.4 Environmental Proposal

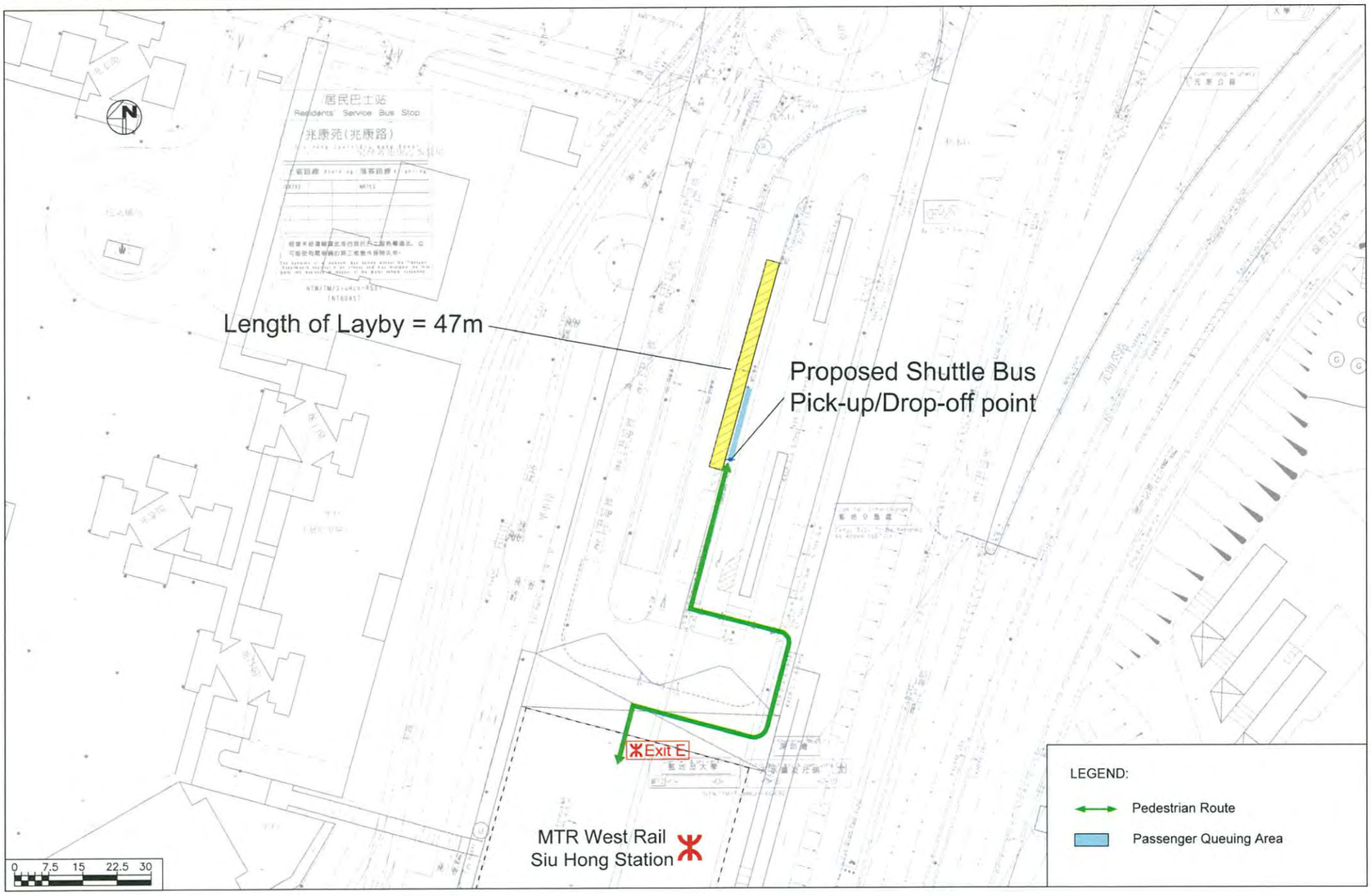
TKLY will adopt the following environmental proposal:-

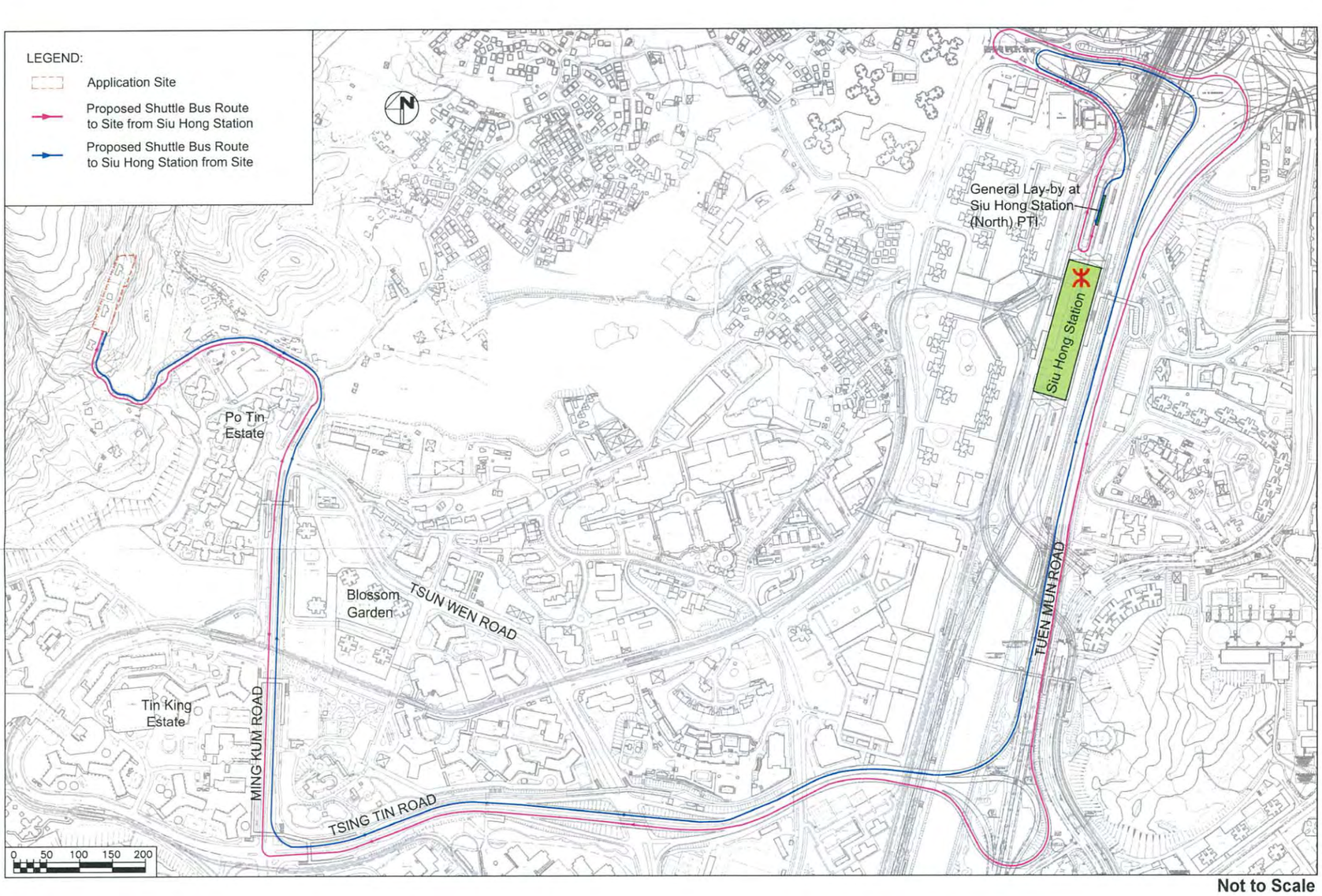
(a) Air Quality Mitigation Measures

On-site joss paper burning is currently not allowed, but if the Applicant considers allowing this in the future, then smokeless joss paper furnaces with dust control measures shall be installed and the recommendations in Environment Protection Department (EPD)'s Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places will be followed.

(b) Sewage Management

During the festival period for provisions of 11,094 niches, the total wastewater generated from the site has been estimated at ~5.4m^3/day (~3.64m^3/day for visitors and ~1.76m^3/day for staffs). On the other hand, the estimated total wastewater generated from the site during the non-festival period is about 1.08m^3/day. As both periods have the maximum sewage less than 2m^3/day for staff, the sewage is suggested to be treated by on-site septic tank/soakaway pit system which the sludge will be collected by a licensed collector when needed. Sewage generated by visitors during festival period will be collected by portable toilets and then tankered away by a licensed collector. The recommended types





Not to Scale

OZZO TECHNOLOGY

Plan Q: Proposed Shuttle Bus Arrangement

of portable toilets to be adopted are either a container toilet installed with jet toilets with at least $4m^3$ in size or a least ten chemical toilets.

An Environmental Assessment and Sewerage Impact Assessment with appropriated environmental mitigation measures have been prepared as attached in **Appendix VII** and **Appendix VIII**.

4.5 Implementation Programme

The application is intended to regularise the Pre-cut-off Columbarium in TKLY. The Columbarium Licence is anticipated to be obtained from PCLB by 2021, taking into account the timing for rezoning application, TPB's plan making on OZP, s.16 planning application, fulfilment of approval conditions, land exchange application, provision of new transport facilities and compliance of relevant building safety regulation, etc.

5. PLANNING JUSTIFICATIONS

TKLY has been occupied by religious and columbarium use for several years. It is situated in an isolated location far away from residential settlement. For application for regularisation of columbarium use, each application should be assessed on individual merit based on the following criteria:-

(a) background of the religious institution and the associated columbarium;
(b) detailed assessment on Government's intention and land use issue; and
(c) technical concerns have been adequately addressed.

Planning assessments on the development proposal have indicated that the proposed development is well justified based on the reasons presented in this section.

5.1 The Religious Background of Tin Kwong Lun Yee

(a) <u>The Origin of Tin Kwong Lun Yee</u>

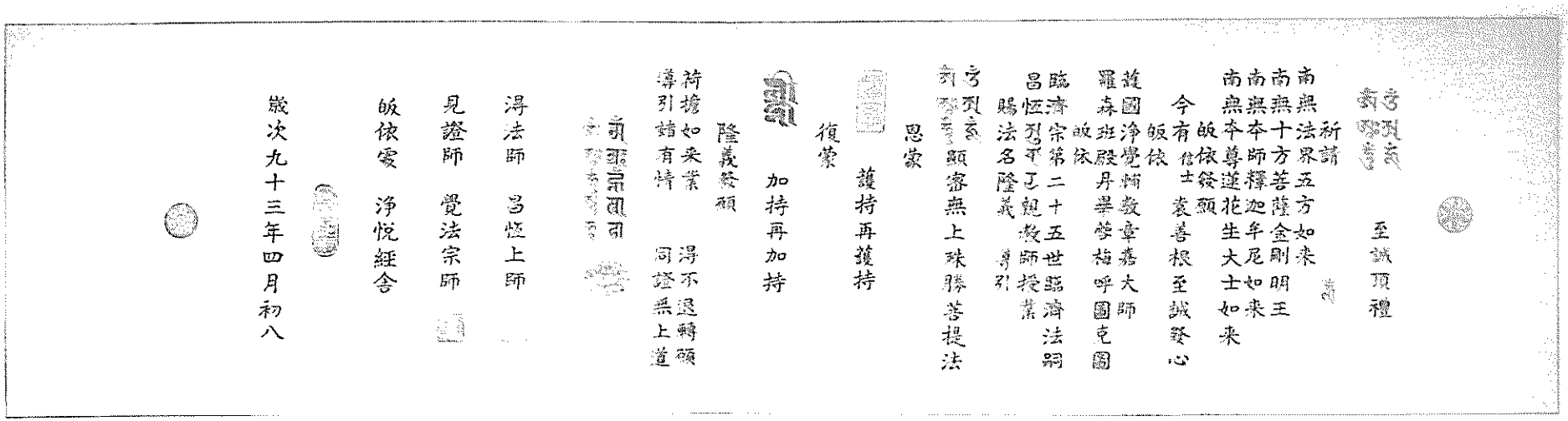
TKLY is a temple dedicated for Lang Yan Sing Gau, which is a branch of Tibetan Buddhism Vajrayana originated from the body of Buddhist religious doctrine and institutions characters of Tibet from the Taiwan stream. As a tradition of Vajrayana, Master Yuen Sin Kan received empowerment from Lineage Holders of all four sects of Vajrayana Buddhism in Taiwan in 2004. He was approved as a recognized "Vajra Acharya" who could give transmission of teaching of Vajrayana and given the religious name of Lun Yee (隆義). A document of the ordination (戒牒) is showed at **Plan R**. In 2006, Master Yuen Sin Kan was enlightened by a vision of spreading the Vajrayana of the Taiwan stream into Hong Kong. He migrated from Taiwan to Hong Kong in 2007 and established the first Vajrayana temple in Hong Kong at the application site – Tin Kwong Lun Yee.

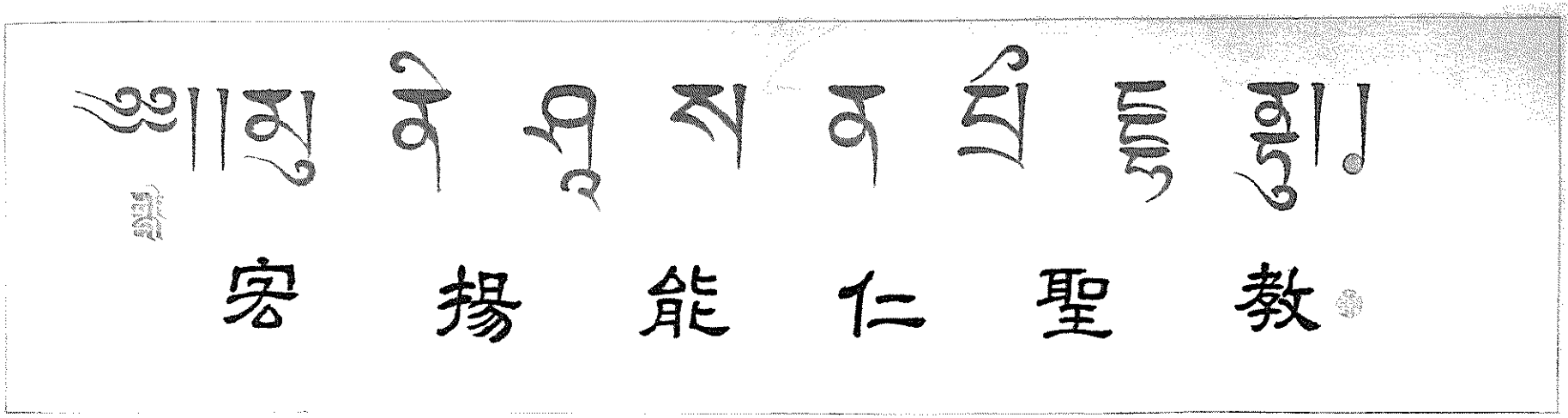
(b) <u>Specific Location for Establishing a Tibetan Buddhist Temple</u>

As a tradition of a Tibetan Buddhist Temple, it is preferable to be located on a slope in a linear orientation as showed by prime examples of Tibetan Buddhist Temple Architecture in **Plan S**. The application site, located on the slope of Kwong Shan Tsuen, matches perfectly with the criteria of a Tibetan Buddhist Temple overlooking Tuen Mun New Town. Moreover, the secluded and natural setting of the application site made it a suitable location for its religious practice. As such, Master Yuen Sin Kan and his followers purchased the application site in 2009 to build the first Tin Kwong Lun Yee temple in Hong Kong.

(c) <u>The Mission and Teaching of Tin Kwong Lun Yee</u>

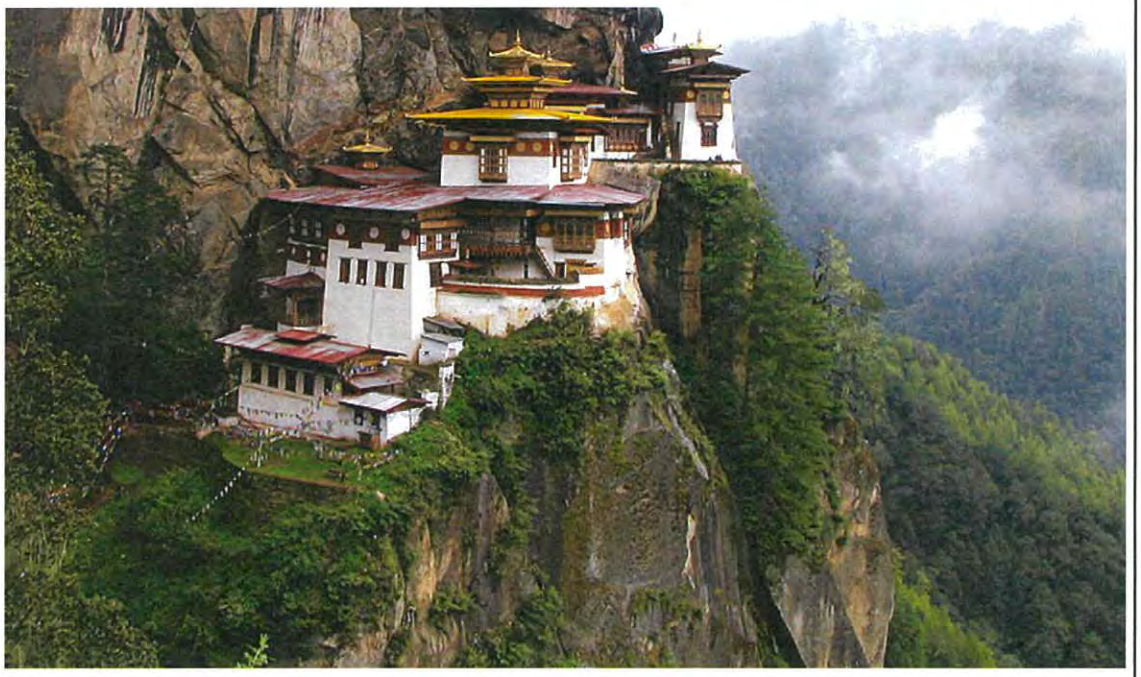
Master Yuen Sin Kan has the mission of promoting the spirit of "Remi" (聯密), a movement of the non-sectarian practice of Vajrayana in conjunction with the study of Mahayana, which is widely supported by numerous Great Masters worldwide. The ultimate goal of Buddha dharma is to liberate all sentient beings from Samsara (輪迴) and to attain nirvana (涅槃) where under no circumstances


至誠頂禮
南無法界五方如來 南無十方菩薩金剛明王 南無本師釋迦牟尼如來 南無本尊蓮花生大士如來
皈依發願 今有信士袁善根至誠發心 皈依 護國淨覺輔教章嘉大師 羅森班殿丹拳帶梅呼圖克圖 皈依 臨濟宗第二十五世臨濟法嗣 昌恆烈平上起敬師授業 賜法名隆義 尊引
今列表 列表顯密無上殊勝菩提法 恩蒙 護持再護持 復蒙 加持再加持 隆義發願 荷擔如來家業 得不退轉願 導引諸有情 得不退轉願 同登無上道
得法師 昌恆上師
見證師 覺法宗師
皈依處 淨悅經舍
歲次九十三年四月初八


教聖仁能揚容



Chari Monastery, Bhutan



Taktshang Monastery, Bhutan

TOCO

Plan S: Traditional Tibetan Buddhism Temple

should this be affected by the differentiation of sects and vehicles. Master Yuen Sin Kan urges all his followers to abandon individualism and follow the bodhisattva deeds for the benefit of all sentient beings. He also emphasizes the importance to forgive and love each other; to abandon hatred, fame, selfishness and prejudice.

TKLY is dedicated to provide training and coaching to members who have to realize the Buddha's teaching in their daily life and to benefit all sentient beings. As a low-profile religion in Hong Kong, it is committed to provide social services by volunteering and offering assistance as needed to organisations such as Social Welfare Department and Hong Kong Society for the Aged etc. as a way in spreading the words of Buddhism to welcome members.

(d) <u>The Ancillary Columbarium</u>

In view of the religious principle of TKLY that is highly respecting the value of life, TKLY has long been provided columbarium service for their members and the community since 2009. In fact, over the past decade many well-established temples, such as Yuen Yuen Institute in Tsuen Wan, Lung Shan Temple in the North District, Fung Ying Seen Koon in Fanling and Ching Chung Koon in Tuen Mun, play an important role in the provision of columbarium facilities. Public consultation on review of columbarium policy states that the public are relatively less concerned about the columbarium facilities managed by religious bodies.

When the founder of TKLY reached an advanced age, his followers have assumed the management responsibility of the temple. The ownership of TKLY was transferred to Tin Kwong Lun Yee Ltd., which is the management company of the temple operated by their followers. Tin Kwong Lun Yee Ltd. has inherited Master Yuen Sin Kan's willingness to provide religious and communal facilities and charitable services. Financial support relies on donation and selling of niches.

5.2 Essential Planning Mechanism to Comply with the Private Columbaria Ordinance

The Government has emphasised in many public occasions that they need to resolve properly the historic problems of existing columbaria which have accumulated over the years. This is because a number of people had purchased niches from these columbaria or even interred the ashes of their deceased relatives therein before the introduction of regulatory regime (see **Appendix I**). On 30.6.2017, the PCO came into effect and the private columbarium in Hong Kong must be covered with a Licence, Exemption or TSOL. Food and Health Bureau (FHB) acknowledged in the PCO the importance of private columbaria in the three-pronged strategy for handling cremated human ashes. The policy objectives aim at stipulating regulation on private columbaria so that they could complement the public columbaria to meet the social needs for ancestral worshipping, to add supply and choice of niches and related services.

An application for both Columbarium Licence and TSOL for Pre-cut-off Columbarium in TKLY were submitted to the PCLB on 8.2.2018 (**See Appendix II**). During the 3 years

of the validity period of TSOL, the Applicant has to comply with all statutory and government requirements, including town planning, land lease and building safety. However, ash interment quantity of the columbarium applied for both licence and TSOL must be limited to that as at the beginning of 30.6.2017. In view of the subject "GB" zone does not have 'columbarium' use under column 1 and column 2, the present rezoning application is submitted to seek the permission from the Board to amend the zoning of the site to "G/IC" in order to allow the existing niches for the placement of urns at the columbarium in TKLY.

5.3 Conforming Government's Intention

Since the 1970s the Government has been encouraging cremations instead of traditional burials. In accordance with an Executive Council decision, the Government has stopped processing applications for private cemeteries where permanent earth burials may be permitted since 1976. The number and percentage of cremations have risen substantially in the past 40 years. However, the progress in providing new public columbaria is primarily constrained by the limited land supply and most people's 'not in my back yard' attitude.

According to the Census and Statistics Department, Hong Kong has an annual death rate of about 6.25% (see **Table 5.1**). Based on a population of 7.5 million, the estimated number of deaths per year would be about 45,867. The numbers indicate a steady increase in annual demand for niche spaces. The demand for niche spaces will continue to increase due to the ageing population and other factors.

Table 5.1: No. of Death and Death Rate in Hong Kong (2013 - 2018)

	2013	2014	2015	2016	2017	2018
No. of Death	43,400	45,100	46,000	46,900	46,800	47,000
Death Rate	6.0	6.2	6.3	6.4	6.3	6.3

Source: Census and Statistics Department

With a growing ageing population in Hong Kong, the numbers of deaths and cremations have been gradually rising annually, resulting in an increasing public demand for columbarium facilities. Although columbaria are essential facilities for the community, it is not easy to develop such facilities in Hong Kong given our small geographical size and the large population as well as strong local resistance against the development of such facilities in their neighbourhood.

The columbarium in TKLY with 10,158 niche spaces yet to be sold at this suitable location can facilitate in increasing the supply of columbarium niches to help meeting the urgent public demand. FHB also agreed that the provision of columbarium should be supported, subject to all statutory requirements and lease conditions being fulfilled, as well as to address local and relevant government departments' concerns over the proposed development. The Applicant has a genuine intention to comply with all the requirements in the PCO.

5.4 Site Suitability for Religious and Columbarium Development

A planning assessment on the location, topography and existing site condition has shown that the site is suitable for columbarium use based on the following reasons:-

(a) Proximity to Public Transport Facilities

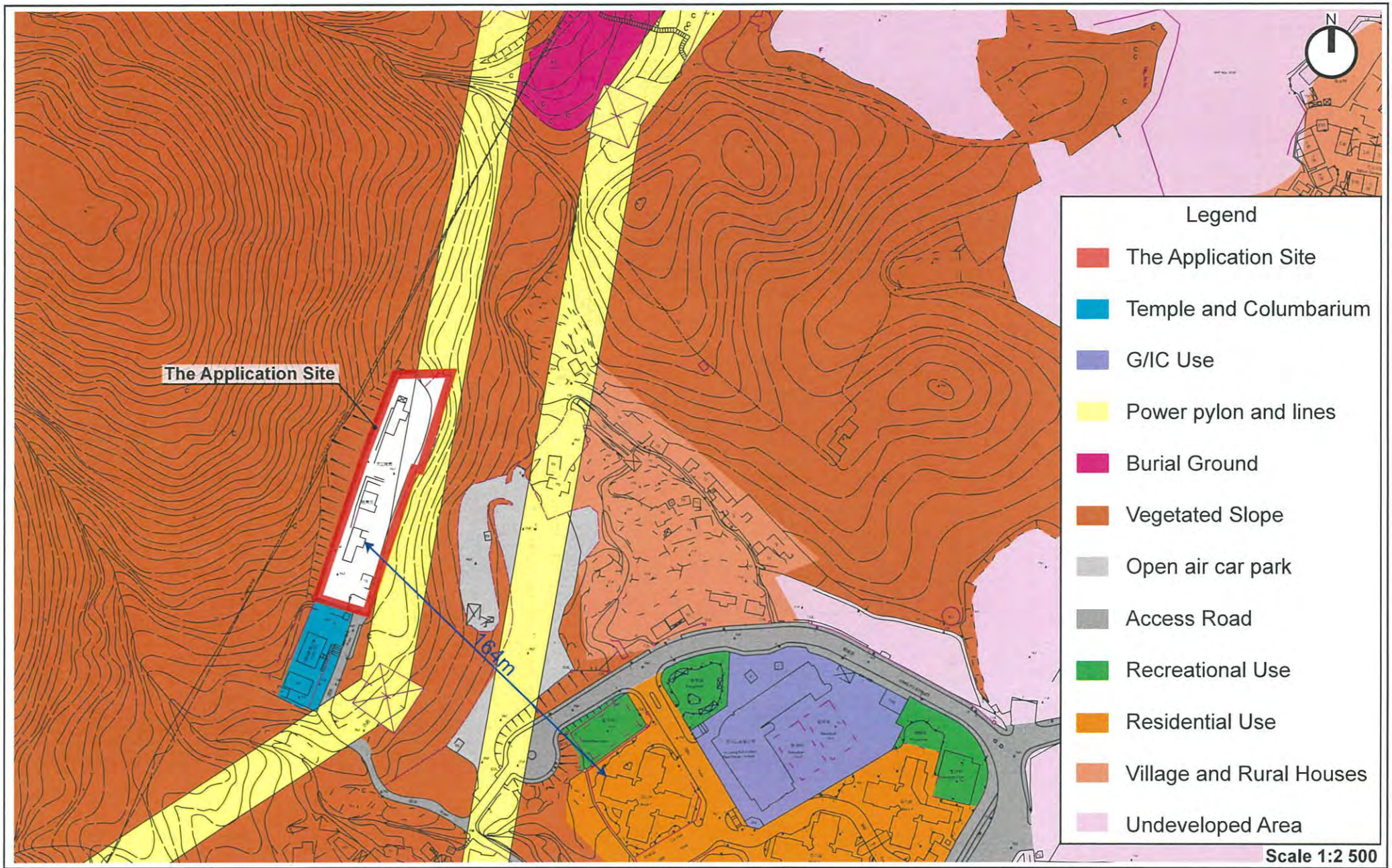
The application site is an ideal location for religious and columbarium uses. Though the site is located at the fringe of Tuen Mun New Town, it is about 10 minutes walking distance from Tin King LRT Station and Po Tin bus terminus. It is also conveniently served by various modes of public transport including buses, public light buses and taxis. In terms of vehicular linkage, it is accessible via a local access road connecting Hing Fu Street roundabout. Hing Fu Street is a local access road connecting Ming Kum Road, which is a local distributor feeding into Tsing Tin Road where vehicles can access Tuen Mun Highway directly. There are various public car parks that are within distance of the site, including Po Tin Shopping Centre Car Park and open air car parks in Hing Fu Street. Drop-off spaces are available in Hing Fu Street near Po Leung Kuk Horizon East Primary School. The well developed infrastructures and public transport system around have created a strong connection to the rest of Tuen Mun area and the surrounding area. The locational advantage allows the site to be conveniently accessed by visitors, particularly for those living in Tuen Mun.

(b) Segregation from Domestic Uses

The application site is located at the upper part of Kwong Shan Tsuen and is relatively far away from residential developments. The existing buildings in TKLY are low-rise in nature and they are unable to be viewed from domestic uses due to its topography, long distance and visual barriers by KHSY, slopes, mature trees, overhead power lines and car park. The proposed traffic, environmental, landscaping and ancillary facilities within the site will help to minimize potential visual impact and allow the visitors to commemorate their ancestors in a convenient and peaceful environment.

(c) Compatible with the Adjacent Land Uses

The proposed religious institution and columbarium at the application site is compatible with the adjacent land uses where a number of existing graves and religious and institutional uses are located. To the immediate south of the site is a religious institution named KHSY. To the further north across the stream is a large burial ground and cemetery. To the east is a slope and open air car park and further east of the site is a piece of "G/IC" site occupied by Po Leung Kuk Horizon East Primary School. To the west is the government vegetation testing ground and Tsing Shan Fire Range. Two large graves are located southeast of the site next to the site entrance and west of the site adjoining the Tsing Shan Firing Range Boundary. TKLY is situated away from the residential settlement with sufficient segregations such as slopes, mature trees, overhead power lines and access road. A Land Use Compatibility Plan is shown in **Plan T**.



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Plan T: Land Use Compatibility Plan

(d) Good Management over the Past Years

TKLY has always maintained a good relationship with their neighbour – KHSY. An agreement with legal effect on the widening and shared use of the access road in front of KHSY is attached in **Appendix III**. TKLY will ensure proper management and maintenance of the site. Up to the present moment, no major public complaint has been received by TKLY. A management plan will be submitted to the PCLB as mandatory requirement for the licensing application and this will further ensure the proper management of the temple.

5.5 Land Use Assessment (No Adverse Impact on "GB" Zone)

A land use assessment has been conducted and demonstrated that the proposed scheme would not significantly affect the "GB" zone based on the following reasons:-

(a) Existing Domestic Buildings Since 1960s

The application site is located on a platform at the hillslope in the north-western fringe of Tuen Mun New Town. The planning intention of the "GB" zone is mainly for agriculture and outdoor recreational outlets. Nevertheless, the site has a long history of sub-urban character as it was previously occupied by domestic houses under building licences surrounded by access roads since 1960s. The aerial photo in 1973 (see **Plan U**) shows that the site was covered by a large platform with three buildings, vehicular access road, garden and shrubs. When the statutory planning control came into force in 1983, the Board had taken a broad brush approach to zone the land use of the site and it's surrounding to "GB". Since the site is surrounded by slopes with mature trees, it had been included in the larger "GB" zone. However, the site has not functioned as a "GB" since then.

(b) Site No Longer Suitable for Residential Use

The application site was previously occupied by three low-rise residential buildings for a long time. As a result of the construction of power pylons and overhead power lines across the site in the 1980s, the site was no longer suitable for residential use and had been abandoned for more than 20 years. On 17.1.1992, the ownership of the application site was transferred to Lanser Hotel Development Co. Ltd. which intended to develop the site into a 3 duplex houses. A s.16 planning application for residential redevelopment was approved by the Board on 19.6.1992 but the approved scheme eventually did not commence. Thereafter the application site continuously became derelict until the ownership was transferred to Master Yuen Sin Kan and his followers with the intention to establish the first temple of Lang Yan Sing Gau in Hong Kong – TKLY.

(c) Rationalisation of the Existing Land Use Pattern

In 2009, Master Yuen Sin Kan purchased the application site and converted the three existing buildings at the site for religious and columbarium use for TKLY by only changing the internal layout. In view of the site is not suitable residential use due to the proximity to power pylons, the proposed "G/IC" zone represents a more appropriate zoning treatment given that the site is underneath an electric power line (Utility Installation) and is immediately adjacent to burial grounds



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Plan U: Aerial Photo in 1973

(Funeral Related Facility) and a religious institution with columbarium (Religious Use). Given the institutional background of the site and its adjoining G/IC facilities, the proposed use is considered compatible with the character of the surrounding environment. The proposed rezoning is also in line with the requirements of PCO to comply with the town planning regulation for Pre-Cut-Off Columbarium.

(d) "G/IC" Zoning More Suitable

The construction of power pylons and overhead power lines across the application site has adversely affected the development potential of the site in particular for domestic use. According to the OZP notes, column 1 under the "GB" zone is mainly for agriculture and outdoor recreational outlets. Since the site was originally a residential site with building entitlement and is mostly covered by a concrete platform with access road connecting the site, the potential for agricultural rehabilitation is relatively low. The current "GB" zone does not provide enough flexibility to the landowner for the change of use. The development potential of the site would continue to be undermined unless there is an appropriate change in land use zoning. The rezoning proposal offers a good opportunity to make efficient use of this scarce land resource.

(e) Compatible with the Planning Intention of "GB" Zone

The proposed development is considered compatible with the planning intention of "GB" zone and the relevant TPB Guidelines based on the following reasons:-

i) Suitable Use

As detailed in the previous sections, the site is no longer suitable for domestic use and it is an ideal location for religious and columbarium use in view of its convenient location, sufficient buffer distance from residential use and land use compatibility. The proposed use is relatively quiet and clean in nature. There will be no incineration process and no burning of ritual paper at the site. The traffic and pedestrian flow peak only surfaces at the two grave-sweeping seasons. The proposed rezoning is in line with the TPB Guidelines No.10 that the Board will prepare to approve applications within "GB" zone in the context of requests to rezone to an appropriate use.

ii) Unique Characteristics

Different to the other site in the same "GB" zone, TKLY and the proposed use have the following unique characteristics:-

i) The site has long been occupied by three low-rise buildings (with building entitlement) and a concrete platform before the gazette of the first Tuen Mun OZP. It is accessible by an existing vehicular road. TKLY does not involve clearance of existing natural vegetation.

ii) The site is located in the fringe of Tuen Mun New Town in close proximity to public transport facilities and infrastructures. It is separated from the edge of Tai Lam Chung Reservoir Country Park, the closest Country Park from the site, by a buffer distance of at least 2.5km.

iii) The rezoning request is aimed at regularising a Pre-cut-off Columbarium in TKLY. It is in line with the PCO's requirements to comply with the planning regulation. It will not set a precedent for similar applications.

iii) Appropriate Form of Development

The current scheme is intended to rezone the site from "GB" to "G/IC" zone without changing the building form of the existing buildings. No new buildings are proposed at the site and temporary structures will be demolished. Compared with redevelopment, the conversion of existing buildings from residential to religious and columbarium use generates less construction waste and thus is environmentally more desirable. The development intensity of this scheme has a plot ratio of 0.155, a site coverage of 7.816% and a building height of 2 storeys (7m) which is small scale in nature and can be visually compatible with the surrounding rural setting.

iv) Enhancement of Landscape Features

The site has long been occupied by three low-rise buildings, vehicular road and concrete platform since 1960s. A landscape proposal has been prepared to provide additional greenery to blend in with the existing natural landscape and to further enhance the local amenity. In the traditional Chinese philosophy and belief, 'Harmony with Nature' is an important element for religious institution and this is also an important concept in the proposed scheme.

v) Minimum Impact to the Surrounding Infrastructure

The proposed use has minimum traffic and environmental impact due to the small amount of visitors during normal day's operation. Adequate mitigation measures dealing with traffic, noise, air quality and sewerage impacts have been proposed to minimise any potential impacts arise from the operation of TKLY during the grave-sweeping seasons. Thus, the proposed development will not overstrain the capacity of existing and planned infrastructures.

vi) Minimum Slope Stability Impact

The proposed development is located uphill on a slope with a concrete platform. The uphill (slope no. 5NE-D/C2) to the west of the site has undergone slope stabilization work by Civil Engineering and Development Department in 2009 and it is proven that the slope is up to standard.

(f) <u>Minimum Impact on the Existing Access Road</u>

The proposed road improvement work only involves the provision of two passing bays and a 1.5m footpath. Some existing trees that are in conflict with the proposed work will be transplanted and therefore significant adverse landscape impact as a result of the proposed scheme is not anticipated. The Applicant will strictly implement the proposed mitigation and control measures to reduce any potential generation of pollution to the surrounding environment.

The proposed rezoning will result in efficient use of the land and enable the Applicant to improve the existing environment to meet various needs of the community. It will help preserving and protecting the landscape quality of the "GB" zone.

5.6 Social Benefits to Locality

The approval of the application will result in the following social benefits:-

(a) Provision of a Well Managed Temple

TKLY is the first temple of Lang Yan Sing Gau in Hong Kong. It is committed to provide social services to organisations in spreading the words of Buddhism. In view of Master Yuen Sin Kan (the founder of TKLY) reached an advanced age, his followers have assumed the management responsibility of the temple. The approval of the rezoning request will facilitate continuous maintenance and management of the temple which will be opened to public visit and use.

(b) Policy Initiative to Safeguard the Interest of the Community and Minimize the Loss of the Purchasers with Ashes of the Deceased Person Yet to be Interred

The present application represents a firm commitment from the Applicant to regularise the columbarium use in TKLY in a proper way in order to meet the latest requirements under the PCO. It is in line with the Government's intention to resolve the historic problems of Pre-cut-off Columbarium in order to minimise any social disruption arising from people who have purchased these niches and massive displacement of interred ashes before the introduction of regulatory regime.

However, under the PCO the operator must not newly let out any interment right for those who have purchased or rented a niche in a private columbarium until the operator have obtained a licence. As a responsible and community oriented religious institution, TKLY is prepared to sell the unsold niches in a reasonable price given that the price of niches in private columbaria has reached an unaffordable level at the present moment.

(c) Providing Opportunities to Upgrade the Local Environment

The application site was abandoned for more than 20 years. The conversion and improvement of existing buildings at the site into appropriate uses blend in with the topography and local environment. Additional planting will be provided in front of the site to further soften the building blocks so that the development would harmonise with the natural environment. A pedestrian access ramps are proposed to reach the first floor of each block to facilitate the disabled and elderly people.

(d) Creating Long-Term Job Opportunities

The proposed development will create long-term jobs to the local neighbourhood who are currently working at the site. Additional employment opportunities will also be created once the application is approved by the Board.

5.7 No Adverse Impact on Traffic and Crowd Management

A Traffic Impact Assessment has been carried out as presented in **Appendix V**. It has the following conclusions:-

(a) The assessment year is set as 2028, i.e. 3 years from the full occupation of the niches by 2025.

(b) In order to minimise the amount of vehicular traffic in the area an the encourage use of public transport, the Applicant proposes to provide free shuttle bus services for visitors between TKLY and West Rail Siu Hong Station (North).

(c) It is estimated that around 88 pcu's (44 in and 44 out) are to be induced by the proposed development during the peak hour of Ching Ming Festival by making reference to the trip rates observed at the surveyed columbarium in Tai Wai during Ching Ming Festival in 2018.

(d) The 2028 Peak Hour Reference Traffic Flows (i.e. without the proposed columbarium) are estimated taking into account the planned and committed developments, as well as the future population and employment in Tuen Mun.

(e) The additional traffic to be induced by the proposed development is added to the 2028 Reference Flows to obtain the 2028 Design Flows (i.e. with the proposed columbarium).

(f) Junction capacity assessments are carried out for all the key junctions within the study area. The results indicated that the key junctions and links in the area would perform satisfactorily in the design year of 2028 even with the proposed columbarium. The traffic impact to be induced by the proposed columbarium would be acceptable without creating adverse impact on the nearby road network.

(g) To improve the condition of the access road leading to the application site, the Applicant proposes to widen the access road to provide 1.5m wide footpath and two passing bays along the road.

The results of the assessment indicate that, with the provision of free shuttle bus services to be provided by the Applicant, the amount of traffic to be induced by the proposed development would be small and hence the potential traffic impact to be inducted by the proposed columbarium would not pose adverse traffic impacts to the road network in the vicinity of the application site.

Moreover, in order to avoid crowd congestion and to ensure that only a controllable number of worshippers enter TKLY for worshipping during the grave sweeping

occasions in a safe and orderly manner, in particular during the peak hour, a Management Plan with workable crowd management tactic has been prepared as attached in **Appendix VI**. Special traffic and crowd management arrangements will be implemented on Ching Ming and Chung Yeung Festival Periods and their shadow periods, including:-

- Visit-by-Appointment System
- Admission Control System
- Tidal Flow System and Holding Area
- Manpower Deployment and Security Management
- Proposed Shuttle Bus Services
- Promotion to Use Public Transport
- Advanced Booking for Parking Spaces for Disabled/Elderly
- Mandatory Policy Agreement in Condition of Sale
- Contingency Plan for Emergency Situations

With the introduction of the aforesaid systematic crowd management method at TKLY, it is expected that the festive event to be operated at the application site can be run in a safe, orderly and smooth fashion without creating any crisis.

5.8 Minimum Environmental and Sewerage Impacts

An Environmental Assessment and a Sewerage Impact Assessment have been prepared as attached in **Appendix VII** and **Appendix VIII** respectively to identify all potential key environmental issues associated with the construction and operation of the proposed development. They have the following conclusions:-

Environmental Assessment

(a) The contractor for the minor construction works shall implement dust control measures in accordance with the requirements of the Air Pollution Control Ordinance (Construction Dust) Regulation. The construction contractor shall also provide regular maintenance of any plant and equipment so as to minimise gaseous emissions. With the implementation of these mitigation measures, there should be no adverse air quality impacts during the construction phase of the project. During operation, there will be insignificant emissions from vehicles transporting visitors to the site. On-site joss paper burning is currently not allowed, but if the Applicant considers allowing this in the future, then smokeless joss paper furnaces with dust control measures shall be installed and the recommendations in EPD's Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places will be followed. Therefore, no adverse air quality impact is anticipated during the operational phase of the project.

(b) No adverse construction noise impact will be anticipated with the implementation of noise mitigation measures during minor construction works. No adverse noise impact due to traffic or religious ceremonies/activities will be anticipated during the operation of the site because of insignificant increase in traffic generation.

(c) The potential water quality impacts arising from the minor construction activities of the project can be controlled by adopting good practice in accordance with Professional Persons Environmental Consultative Committee Practice Note 1/94. The construction contractor shall also apply for a Discharge Licence from EPD under the Water Pollution Control Ordinance (WPCO), if necessary. There is currently no public sewerage connection at the site, and there are no immediate plans by the Government to extend the existing sewerage system nearby to the site. Nevertheless, the Applicant confirms that all wastewater will be collected, treated and disposed of in accordance with the WPCO. During operation, because only small quantities of sewage will be generated during non-festival periods, a septic tank may be used for treating sewage. On a need basis, portable toilets can also be provided during festival periods to address an anticipated increase in quantity of sewage generated. With the provision and regular maintenance of the above-mentioned sewage treatment facilities, no adverse water quality impact is anticipated during operation of the project.

(d) There is no evidence to suggest that there have been potentially contaminating activities carried out at this site in the past and therefore no suggestion that the land may be contaminated. Municipal Solid Waste (MSW) generated by site workers during the construction stage will be disposed of regularly to avoid creating odour impact or pest and vermin problems. With the above measures in place, no unacceptable waste management impact during the construction phase is anticipated. During the operation, the only major type of waste that will be generated is MSW, which will be collected and disposed of regularly. As such, no adverse waste impact is anticipated during the operation phase and no mitigation measures are considered to be necessary.

(e) With the implementation of the recommended mitigation measures and the adoption of good site practice, the findings of this Environmental Assessment study demonstrate the environmental acceptability of the development in terms of both construction and operation.

Sewerage Impact Assessment

(a) There is no public sewerage connection in the vicinity of the site at present, and there are no immediate plans by government to extend the sewerage system to the site in the near future.

(b) During the festival period of provisions of 11,094 niches, the total wastewater generated from the site has been estimated at ~5.4m^3/day. On the other hand, the estimated total wastewater generated from the site during the non-festival period is about 1.08m^3/day. As both periods have the maximum sewage less than 2m^3/day, the sewage is suggested to be treated by on-site septic tank/soakaway pit system which the sludge will be collected by a licensed collector when needed.

(c) For potential scheme with provisions of up to 11,094 niches during festival period, the total wastewater generated from the site has been estimated at ~5.4m^3/day. Among the ~5.4$m^{3/}$day sewage generated, it is recommended that sewage generated by staff of about 1.76m^3/day will be treated by the on-site septic tank/soakaway pit system, while that 3.64m^3/day generated by visitors will be collected by portable toilets and then tankered away by a licensed collector. The recommended types of portable toilets to be adopted are either a container toilet installed with jet toilets with at least 4m^3 in size or a least ten chemical toilets.

(d) In conclusion, the sewage impacts imposed by the project are considered to be acceptable.

5.9 Minimum Landscape Impact

A Landscape Assessment for the application site and the proposed road improvement scheme has been carried out as presented in **Appendix IV**. The proposed scheme will not result in any significant landscape impact based on the following justifications:-

(a) The present application is aimed at regularising the existing religious and a Pre-cut-off Columbarium named TKLY within the three existing buildings at the site. As shown in **Plan U**, the site has long been covered by a large platform with three buildings and vehicular access road. In order to enhance the proposed development to be compatible with the existing rural landscape character, landscape treatment will be introduced for the project site. However, it is necessary to reserve sufficient area for EVA, visitors holding, and pedestrian circulation in order to comply with the requirements of the PCO for the columbarium licensing application.

(b) The sizeable site area provides an ample amount of space and opportunities for greening purposes. It is proposed to plant 24 nos. of trees within the landscape area surrounding the buildings to serve as visual screens and further enhance the peaceful and religious character of the development. A total of 959m^2 landscape area will be provided within the site.

(c) For the proposed road improvement scheme between TKLY and the Hing Fu Street Roundabout, there is 9 no. of trees which are directly conflicted with the proposal. However, the tree form and amenity value is low and the tree assessment recommended those tree to be felled. With the aim to compensate for those trees to maintain the present greenery scenery, it is recommended to plant 17 nos. of Bauhinia blakeana to the opposite location.

(d) In addition, there will be an increased provision of a variety of trees and shrubs as well as landscape features in the site. This will enhance the proposed development to be compatible with the existing landscape character and help to minimize the visual impact of the buildings.

With the adoption of the landscape proposal and mitigated measures, the proposed development will not have significant landscape impact on the locality. The proposed scheme could compensate for the loss of landscape resources as far as possible. A more comprehensive package of proposals will be formulated during detailed design stage of the project.

5.10 Minimum Visual Impact

The proposed development will not result in any significant visual impact based on the following considerations:-

(a) The application site is a flat piece of land situated on a slope, about 27m in level difference from the nearest major road. It is topographically located in a secluded area surrounded by green vegetation on three sides and a columbarium development at the immediate south of the site. The site comprises three buildings at two storeys each (about 7m) which have been established in the area since 1960s. Because of the difference in altitude and mature trees surrounding the site, the existing buildings at the site are hardly visible from outside.

(b) The three existing buildings were converted into religious and columbarium use for TKLY by only changing the internal layout. The present application is to rezone the site to "G/IC" to allow s.16 application to regularise the existing temple and columbarium at the site. The Applicant has proposed some dense planting along the site boundary facing Hing Fu Street, and these plantings would be of sufficient height for screening. Hence, the proposed scheme will minimise any potential psychological impact on surrounding residents.

(c) There are only a few Visual Sensitive Receivers (VSRs) can be found to the east of the site (see **Plan V**). Some low-rise domestic structures of Kwong Shan Tsuen fall within 150m radius of the site. However, these structures are located downhill of the area and are separated to the site by power pylon, power lines, an open car and mature trees on a slope. Moreover, the application site is not in the direct sightline of these structures due to its building orientation (mainly facing Hing Fu Street). Other major residential development including Po Tin Estate and a few low-density structures at Po Lai Yuen are situated more than 150m away from the site. In view of the small size of the buildings surrounded by the existing and proposed trees, as well as the visual obstructions surrounding the site, the visual impact on residents is therefore minimal.

Given the small scale of the buildings located in a secluded location, local concerns regarding visual impacts associated with the proposed development would not be anticipated. Additional planting are proposed at the south-eastern edge of the site to further enhance the visual quality of TKLY.

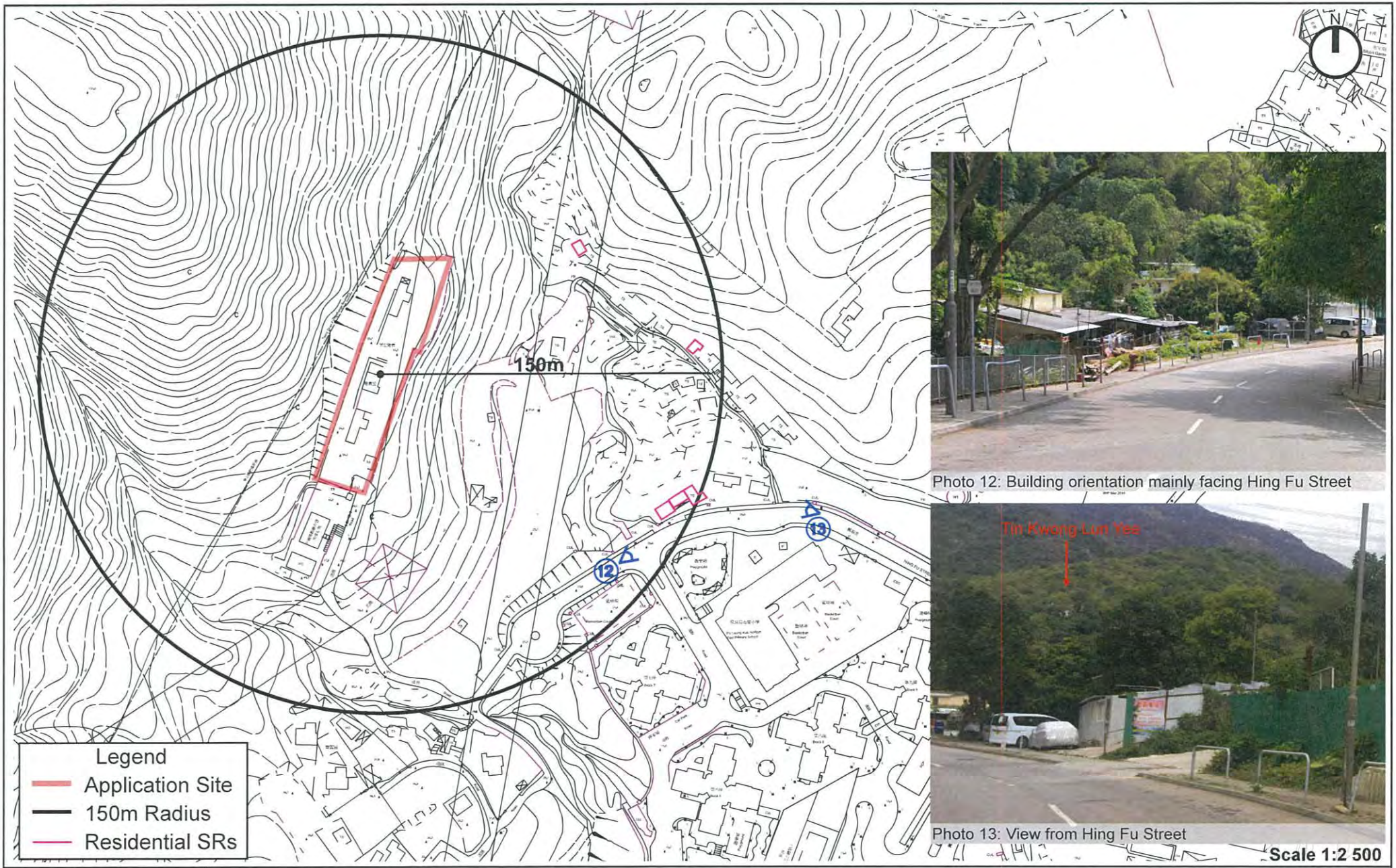


Photo 12: Building orientation mainly facing Hing Fu Street

Photo 13: View from Hing Fu Street

Scale 1:2 500

TOCO

Plan V: Mimimum Visual Impact

5.11 Land Use Assessment on Precedent Cases in Tuen Mun Area

The approval of the rezoning proposal will not set an undesirable precedent for other similar applications in the area based on the following reasons:-

(a) Essential Social Facility for the Community – Not an Undesirable Use

Burial arrangement is a necessary element to allow family, relatives and friends pay respect to their ancestors and loved ones, which is an important matter for both the departed and the living. The wish of deceased to have their cremated ashes to be properly placed should be respected. However, the progress in providing new public columbaria is primarily constrained by the limited land supply and most people's 'not in my back yard' attitude.

The religious principle of TKLY is highly respecting the value of life and it has provided columbarium service for their members and the community since the establishment of the temple at the site. The PCO came into effect on 30.6.2017 and the Government is prepared to adopt a pragmatic and sensitive approach to resolve the historic problem of these Pre-cut-off Columbaria so as to minimise any social disruption arising from people who have purchased these niches and displacement of interred ashes before the introduction of regulatory regime.

The present application is to seek planning permission from the Board to regularise the existing columbarium at the site, which is in line with the Government's policy objective. The proposed scheme mainly involves the retention of existing buildings which are low-rise and low-density in nature. With the adoption of appropriate mitigation measures, the proposed uses will not pose significant adverse traffic, environmental, landscape, visual and sewerage impacts on the neighbourhood. Columbarium is an essential commercial facility for the society and therefore it should not be regarded as an "Undesirable Use".

(b) Study on Similar Cases of Pre-cut-off Columbarium in Tuen Mun Area

In response to the latest requirement of PCO, the Applicant had submitted both applications for Columbarium Licence and TSOL for Pre-cut-off Columbarium in TKLY to the PCLB on 8.2.2018. During the validity period of TSOL, the Applicant has to comply with all statutory requirements, including town planning, land lease and building safety. As such, the present application is submitted to regularise the Pre-cut-off Columbarium in order to comply with the planning requirement of the new ordinance. This is different to those planning application for providing a new columbarium or increasing number of columbarium niches which should be defined as the "Post-cut-off Columbarium".

According to the list of licensing applications for Pre-cut-off Columbarium submitted to the PCLB before 29.3.2018, apart from TKLY there are 21 columbaria within the planning area of Tuen Mun OZP. A planning study has been conducted to identify whether these columbaria would be classified as "similar case" (see **Table 5.2**). The observations are as follows:-

- Land Use Zoning
  The application site is zoned "GB" on the Tuen Mun OZP. Out of a total of 21 columbaria in Tuen Mun, there are 9 columbaria located within the "GB" zone, i.e. TKLY, KHSY, Saint Temple, Yuen Kok Sim Yuen (YKSY), Citi Fair Management Ltd., Able Fortune Enterprise Ltd., Tsing Wan Kun, 覺塵禪寺 and Tsing Shan Monastery.

- Pre-cut-off Columbarium
  According to the PCO, a "Pre-cut-off Columbarium" means a columbarium that was in operation, and in which ashes were interred in niches, immediately before the cut-off time (i.e. 8 a.m. on 18.6.2014). Part A and Part B of Information on Private Columbaria published by Development Bureau on 18.6.2014 shows that 6 out of 9 of the above columbaria are on the list, namely TKLY, KHSY, Saint Temple, Tsing Wan Kun, 覺塵禪寺 and Tsing Shan Monastery.

- Exemption and Post-cut-off Columbarium
  YKSY was found on the survey sheet dated 15.5.2014 and thus it could be regarded as a "Pre-cut-off Columbarium". However, YKSY has applied for Exemption and therefore planning application for compliance of planning-related requirements for the PCO is not required. On the other hand, there is no evidence indicated that Citi Fair Management Ltd. and Able Fortune Enterprise Ltd. are in operation before the pre-cut-off time. Therefore, they should not consider as similar case.

Given the unique background of TKLY, only 5 similar cases could be found in Tuen Mun, including KHSY, Saint Temple, Tsing Wan Kun, 覺塵禪寺 and Tsing Shan Monastery. Saint Temple had already obtained the planning approval on 28.7.2017. Tsing Wan Kun, 覺塵禪寺 and Tsing Shan Monastery are located within Tsing Shan Tsuen which is far away from TKLY and has a totally different traffic network and pedestrian access arrangement to the Kwong Shan Tsuen area. Only KHSY is located adjacent to the TKLY.

With reference to the recent columbarium case in Tsing Shan Tsuen, Transport Department advised the Traffic Impact Assessment should take into account all the unsold and/or new niches under approved columbarium applications and the unsold and/or new niches of applications still under processing, i.e. those received by TPB but yet to be submitted for consideration. Withdrawn applications and applications already rejected by the TPB need not be taken into account. As of today, no similar approved case or similar application under processing is founded in the vicinity of the site. Nevertheless, the Explanatory Statement of Tuen Mun OZP on "GB" zone states that each application will be considered on its individual merits. TKLY has maintained a good relationship with KHSY and they have signed an agreement with legal effect on the widening and shared use of the access road (see **Appendix III**).

Table 5.2: Study on Columbaria from PCLB Applications in Tuen Mun

Name	Zoning	Pre-cut-off Columbarium	Type of Specific Instrument		Is It a Similar Case?
			Licence	Exemption	
Tin Kwong Lun Yee	**GB**	√	√		**N/A**
Fat Yuen Ching Shea	G/IC	√	√	√	
Lin Chi Ching Yuen	G/IC	√	√	√	
Kwong Hau Sin Yuen	GB	√	√		√
Shan Yuan	G/IC	√	√		
Gig Lok Monastery	G/IC	√	√		
Filial Park	G/IC	√	√		
Sze Lo Temple	G/IC	√	√	√	
Shan Guo	G/IC		√		
Ksitigarbha Hall	G/IC	√	√	√	
Ching Chung Sian Yuan	G/IC	√	√		
光留園	G/IC	√	√		
Sin Hing Tung	G/IC	√	√		
Saint Temple	GB	√	√	√	√
Tsing Wan Kun	GB	√	√		√
Buddhist Yan Tse Monastery	G/IC	√	√	√	
Yuen Kok Sim Yuen	GB	√		√	
Citifair Management Ltd.	GB		√		
Able Fortune Enterprise Ltd.	GB		√		
Sha Law Ching Shea	G/IC	√	√	√	
覺塵禪寺	GB	√	√	√	√
Tsing Shan Monastery	GB	√	√		√

Source: Private Columbaria Licensing Board and Town Planning Board

(c) <u>Control Mechanisms to Ensure Proper Development</u>

There are sufficient control mechanisms from the Government to ensure proper development in TKLY. A s.16 planning application will be required after successful rezoning. The proposed "G/IC" zone will facilitate the relevant government departments to control the number of niches, development intensity, facilities provision, layout of the proposed scheme under the OZP restriction. It can also ensure the proposed traffic, environmental and landscaped mitigation measures are implementable and enforceable. In addition, the PCO is in effect and one of the objectives of the licensing scheme is that private columbaria are in compliance with the statutory requirements before a licence is granted to the operator.

(d) <u>Similar Past Cases</u>

According to the TPB Guidelines No. 10, the Board will only be prepared to approve applications for development in the context of requests to rezone to an appropriate use. There are successful rezoning cases from "GB" to "G/IC" zone for religious and columbarium use, i.e. Yuen Yuen Institute (No. Z/TW/7) and Si Fong Che (No. Z/TW/8). Moreover, there are several s.16 planning applications for the above use in "GB" zone approved by TPB, i.e. Shun Fung Temple (No. A/KC/394), Lung Shan Temple (No. A/NE-LYT/370), Shun Shin Chee Kit Yin Koon Ltd. (No. A/ST/665), Saint Temple (No. A/TM/497) and Pun Chun Yuen (No. A/TP/64). In view of the similar nature of the previous approved cases, it is hoped that the Board would also give favourable consideration to this application.

6. CONCLUSION

The Government has emphasised in many public occasions that they need to adopt a pragmatic and sensitive approach to resolve properly the historic problems of Pre-cut-off Columbaria which have accumulated over the years. The PCO came into effect on 30.6.2017 and the private columbarium in Hong Kong must be covered with a Columbarium Licence. During the 3 years of the validity period of TSOL, TKLY has to seek a licence which must comply with all statutory and government requirements, including town planning, land lease and building safety.

This rezoning request is for the TPB's agreement to amend the zoning of the site at various lots in D.D. 132 on the Approved Tuen Mun OZP from "GB" to "G/IC" zone. The proposed "G/IC" zone will permit the religious use and the subsequent submission of a s.16 planning application to regularise a Pre-cut-off Columbarium with a total of 11,094 niches before 30.6.2019 within TKLY. A series of improvement measures have been proposed in addressing the potential impacts from TKLY. Planning and technical assessments have indicated that the present application is well justified based on the following reasons:-

(a) the application is aimed at regularising the existing niches from a Pre-cut-off Columbarium ancillary to TKLY. It is in line with the requirements of the PCO;
(b) the proposed development is in line with the Government's intention to relieve part of the urgent demand for columbarium niche spaces in Hong Kong;
(c) the application site is no longer suitable for residential use and it was abandoned for more than 20 years due to the construction of power pylons and overhead power lines across the site in the 1980s;
(d) the application site situated on a slope in a linear orientation is an ideal location for Tibetan Buddhist Temple;
(e) it is accessible by vehicles and is within walking distance to the bus terminus and public car park underneath the Po Tin Estate;
(f) the existing buildings at the site are low-rise in nature and they are segregated from residential use by slope with mature trees and power pylons;
(g) the applied uses are compatible with the adjacent land uses since the site is abutting a religious institution with columbarium use and is surrounded by graves;
(h) the small scale development will unlikely result in any significant land use, traffic, environmental, sewerage, visual, and landscape impacts; and
(i) the application will not set an undesirable precedent for similar applications in view of its religious background, site suitability, scale and the new policy initiatives.

In view of the small scale development and planning justifications presented in this Planning Statement, honourable members of the Town Planning Board are requested to approve this planning application.

Private Columbaria Ordinance
Press Release
Important Dates
Frequently Asked Questions
Alternative Means of Disposal of Ashes
Private Columbaria Affairs Office
Enquiry, Suggestion and Complaint
Related Links

Press Release

Policy initiatives related to land premium and traffic impact assessment of pre-cut-off columbaria announced by Government

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The Government today (November 22) announced that the Chief Executive in Council has approved two policy initiatives to address the land premium and traffic impact assessment (TIA) issues of pre-cut-off columbaria seeking a licence.

According to the Private Columbaria Ordinance, a pre-cut-off columbarium means a columbarium that was in operation, and in which ashes were interred in niches, immediately before the cut-off time, i.e. 8am on June 18, 2014.

Policy initiatives in line with overall interests of the community

A government spokesman said, "We need to resolve properly the historic problems which have accumulated over the years. Quite a number of people had purchased niches from these columbaria or even interred the ashes of their deceased relatives therein before they knew that the Government would introduce a regulatory regime. Given this, we need to adopt a pragmatic and sensitive approach towards the consumers who have purchased these niches, and the dedicated persons, to minimise their losses and any social disruption arising from massive displacement of interred ashes.

"In contemplating these policy initiatives, the Government mainly takes into account the overall interests of the community so as to avoid affecting the descendants, in particular their wish not to disturb the interred ashes of the deceased as far as practicable.

"We must emphasise that all pre-cut-off columbaria will not automatically get a licence as a result of the policy initiatives. The Private Columbaria Licensing Board will still consider each application in accordance with the requirements for applying for a licence as set out in the Ordinance."

Land premium arrangement and safeguards to protect consumers

On land premium, in respect of pre-cut-off sold niches, originally only pre-cut-off columbaria eligible for an exemption in all other respects (in operation before January 1, 1990) were allowed to apply for waiving payment for the regularisation exercise (the waiving arrangement). The Government has now decided to extend the waiving arrangement to allow pre-cut-off columbaria eligible for a licence in all other respects (in operation before 8am on June 18, 2014) to apply.

The Government spokesman added, "Only those pre-cut-off columbaria eligible for a licence in all other respects can apply. In other words, the prerequisites are that the operator: 1) must be a pre-cut-off columbarium; 2) must fulfil the licensing criteria for a licence in all other respects, which include more than 10 relevant requirements on planning, building and fire safety.

Specifically, a pre-cut-off columbarium confirmed to be eligible for a licence in all other respects may apply for administratively regularising, in respect of the pre-cut-off sold niches, breaches of relevant lease conditions and/or unlawful occupation of unleased land by way of a waiver and/or a short term tenancy (STT), and waiving the relevant waiver fees, STT rentals and administrative fees before and during the licence

Information for Consumers
Information for Operators
Private Columbaria Licensing Board
List of Applications for Specified Instruments Received
Ash Temporary Storage Service by FEHD
Application Guide and Forms for Licence and Other Specified Instruments
Guidelines for Carrying out the Prescribed Ash Disposal Procedures
Other Multimedia Information
Information on Ash Disposal by Columbaria

period. However, each application will be considered on a case-by-case basis having regard to its circumstances and merits.

The Government will impose a series of safeguards on pre-cut-off sold niches covered by the waiving arrangement, including that the operators are not allowed to impose extra charges beyond what was provided in the original agreements with the consumers concerned.

At the same time, the operators should seek the agreement of the consumers to abide by the restrictions below: (1) for those partially filled or unfilled niches, replacing the name of a dedicated person where his/her ashes have yet to be interred with another person is only limited to his/her relative (in accordance with the definition of "relative" in the Ordinance); (2) for filled niches, if any interred ashes are removed subsequently in the future, such niches are not allowed to be "refilled". After the niches referred to in (1) have become the niches referred to in (2) in future, the restriction in (2) would also apply to them. As such, the operators have to provide to the Licensing Board registers for endorsement for the purpose of the restrictions in (1) and (2) above.

For the number of niches without agreement between the operator and the consumers being reached, or in the absence of other equally effective means to ensure compliance with the above safeguards, a full market value (FMV) land premium will be payable. If FMV land premium is paid, such niches could be traded in the market free of the above restrictions. The operators must pay an FMV land premium for all the post-cut-off sold or newly let out niches.

"The above waiving arrangement is aimed at protecting consumers. From the consumer's perspective, whether a pre-cut-off columbarium applies for an exemption or a licence should make no difference to them as they have already purchased or even have been using the relevant niches. If the operators recoup land premium from consumers who have purchased the niches in the past or they pass on the land premium to consumers who will purchase niches in future, various kinds of disputes will arise," said the spokesman.

Initiative relating to TIA

Taking into account the overall interests of the community, the Government has decided to use an empirical evidence approach as the basis for assessing traffic impacts when the Government departments process the licence application from a pre-cut-off columbarium whose operation only involves the number of niches sold before June 30, 2017 (the enactment date of the Ordinance).

The Government has studied this issue in depth and has the following three observations. Firstly, the columbaria concerned are not brand-new planned establishments but have already been in existence and operation in the community for a long time. Secondly, the traffic and pedestrian flow problem mainly surface during the grave-sweeping seasons (Ching Ming Festival and Chung Yeung Festival) and the situation outside the grave-sweeping seasons is usually not a major concern. Thirdly, an applicant for a licence would have to submit a management plan covering the traffic and crowd control measures for prior approval by the Licensing Board, and is required to comply with the licensing conditions relating to the traffic and pedestrian flow management measures imposed by the Board.

According to on-site observation, traffic and pedestrian flow management arrangements are already implemented by the Government departments in some of the areas where a number of columbaria are located together. The Government departments concerned have prepared contingency plans in areas with needs to cater for ad hoc situations. The Government has also noticed that some columbaria also

actively make some traffic arrangements during Ching Ming Festival and Chung Yeung Festival, such as providing dedicated coaches to pick up and drop off gravesweepers. If only niches sold as at June 30, 2017 of pre-cut-off columbaria are counted, the traffic level in those areas during the peak hours is, overall speaking, still at an acceptable level. On the part of individual columbaria, operators have the responsibility to provide practicable mitigation measures within their capability. The Government departments will reflect to the Licensing Board their views on suitable mitigation measures that should be followed up by individual cases. We believe that the Licensing Board will, having regard to the situation, vet the management plan of the operators and impose appropriate licensing conditions.

If a pre-cut-off columbarium would like to sell or newly let out niches after June 30, 2017, or any post-cut-off columbarium would like to submit planning or licence applications for their development, the TIA mechanism is applicable to them.

Responsibilities of private columbarium operators

"The operation of a private columbarium in Hong Kong must be covered by a licence, an exemption or a temporary suspension of liability according to the Ordinance. Only private columbaria that have obtained licences may sell or newly let out niches. This fundamental principle has not been changed and will not be changed," added the spokesman.

"Operators of private columbaria have the responsibility to abide by the various licensing requirements as stipulated under the Ordinance."

According to section 99 of the Ordinance, a person who commits an offence of providing information that is false or misleading is liable on conviction to a fine of $500,000 and to imprisonment for two years. In addition, if an operator deceives the Government, thus resulting in prejudice to the Government, that person commits the offence of fraud under the Theft Ordinance, which would render an offender liable on conviction to a maximum penalty of imprisonment for 14 years. Moreover, if a columbarium operator and a consumer conspire to deceive the Government, they commit the offence of conspiracy to defraud. Such an act is contrary to Common Law and punishable under the Crimes Ordinance, which would render an offender liable to a maximum penalty of imprisonment for 14 years.

A Legislative Council brief on the above arrangements can be downloaded from the Food and Health Bureau's website (www.fhb.gov.hk/download/press_and_publications/otherinfo/160700_columbarium/e_legco_brief_on_land_premium_TIA.pdf).

Ends/Wednesday, November 22, 2017
Issued at HKT 17:30

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APPENDIX II:

Submission Letter for Applications for Columbarium Licence and TSOL

TOCO PLANNING CONSULTANTS LTD.

TOWN PLANNING, ENVIRONMENT & DEVELOPMENT CONSULTANCY

達材都市規劃顧問有限公司

2A Lippo Leighton Tower,
103 Leighton Road, Causeway Bay,
Hong Kong.
Tel: 2895 0168
Fax: 2577 2862
E-mail: tocoplanning@hotmail.com
Website: http://www.tocoplanning.com

Secretariat of Private Columbaria Licensing Board
Private Columbaria Affairs Office
6/F, Lui Kee Education Services Centre,
269 Queen's Road East,
Wan Chai, Hong Kong

Dear Sir/ Madam,

8 February 2018

Application for "Pre-cut-off Columbarium" Licence and Temporary Suspension of Liability for Tin Kwong Lun Yee in Lot Nos. 1744A - C, 1744F - I in D.D. 132, Tuen Mun

We submit herein, on behalf of Tin Kwong Lun Yee Ltd., an application for a Private Columbarium Licence and an application for a Temporary Suspension of Liability for "Pre-cut-off Columbarium" under the Private Columbaria Ordinance. The applications are intended to regularise the existing columbarium named Tin Kwong Lun Yee at the captioned lots in Tuen Mun.

In view of the policy initiatives related to traffic impact assessment of pre-cut-off columbaria announced by Government on 22.11.2017, the Applicant has decided to submit two separated sets of application as follows:-

1. Application 1 only involves those columbarium niches that had been sold before 30.6.2017; and
2. Application 2 only involves those columbarium niches that had not been sold on 30.6.2017.

Please find attached two different sets of file with necessary documents in support of the two applications. An authorisation letter is also enclosed for your attention. The Applicant has employed A & B Design Consultants Ltd. to undertake the necessary technical assessments for the applications such as building-related requirements, structural and fire safety requirements, electrical and mechanical safety requirements, and drawings prepared by Authorised Person. These outstanding documents will be submitted before the end of February 2018.

Please contact the undersigned or my colleague Mr. Daniel Wei at 28950168 if you have any queries and additional information pertinent to the applications. For queries in relation to the management plan, please contact Ms. Yip Yuk Ping of Tin Kwong Lun Yee Ltd. at 24503973.

Yours faithfully,
Toco Planning Consultants Ltd.

TOCO PLANNING CONSULTANTS LTD.

RECEIVED
- 8 FEB 2018
Private Columbaria Affairs Office
FEHD

Ted Chan
Managing Director

TED T. C. CHAN
MPIA, MHKIP, RPP

I, the undersigned, do hereby certify that I have this day examined this / the foregoing document with its original (or a properly certified copy of the original) and that the same is a true and complete copy thereof.
Dated 16 AUG 2018
Kan Johnny Chun Ho
Solicitor, HKSAR
Messrs. Chan Ching Man & Co.

通路權契約

有關 : D.D. 132, Lot 1744, S.D. ss.1 及 S.D. RP

此通路權契約謹於 2018 年 5 月 18 日由 :-

一、 富偉實業有限公司, 其註冊地址為香港九龍彌敦道 574-576 號胡富商業大廈 26 樓 (下稱 "授權者"); 及

二、 天罡隆義有限公司, 其註冊地址為香港新界屯門興富街 D.D. 132, Lot 1744, A, B, C, F, G, H 及 I (下稱 "獲權者")。

所共同訂立。

鑑於 :

(一) 授權者乃香港新界屯門 D.D. 132, 地段 Lot 1744, S.D. ss.1 及 S.D. RP 之註冊業主, 包括附圖 "A" 黃色部份 (下稱 "該黃色地段");

(二) 獲權者乃附圖 "B" 綠色部份地段之業主(即授權者北隣接壤業主), 過往多年及現在仍有使用該黃色地段之通路, 並於此確認以立契約作出下述通路權之要求, 以令其一切訪者、代

註冊摘要編號 Memorial No.: 18052902090017 DOC

理人及/或賓客、其行人及/或車輛可從附圖 "B"所顯示黃色部份(政府公共通路)進出通過該黃色地段以往返獲權者之該綠色部份物業(下稱 "獲權者物業", 即 D.D. 132, Lot 1744, S.A, S.B, S.C & S.F 地段, 如附圖 "C" 所示), 而不受授權者或其承繼者及代理人任何干擾及/或阻撓;

(三) 授權者亦同意接受港幣[redacted]之代價, 授予獲權者下述通路權。

現雙方同意訂立契約條款如下 :-

1. 授權者同意接受, 並於此確認已全數收訖, 獲權者所支付之港幣[redacted], 以不可撤回之承諾頒授予獲權者或其承繼者或代理人等, 來訪者及/或賓客, 或獲其準予者, 全權及自由, 不論日夜, 不管是行人或車輛, 使用通過該黃色地段以進出來回往返, 及寧靜享用其獲權者物業, 直至授權者之政府地批屆滿或續約地批後屆滿前(下稱 "該通路權"), 雙方並於此清楚表明若授權者之地批獲續, 此契約之效用年期將如其續約所續全部年期順延。

2. 授權者向獲權者以訂定立契條款承諾將會維持該黃色地段暢通無阻無礙，而授權者將不會及不可在該黃色地段上豎立、安裝、擺放任何設施、設置、構築物、或將該黃色地段以用作泊車處，而造成獲權者或其代理或承繼者或其賓客、訪客受阻受礙，不能或難以使用該通路權。授權者並須維持該黃色地段完好及修整。

3. 獲權者向授權者亦以訂定立契條款承諾，如該黃色地段或任何部份因受獲權者或其代理人及/或訪者、賓客之不慎或疏忽而獲損壞，則獲權者必須負責維修該黃色地段或所受損壞部份完好，並支付有關維修費用。

4. 因此契約條款與該黃色地段之土地使用有關及將影響授權者及/或獲權者其承繼人或代理人之土地使用，為免存疑，此契約條款是雙方特意表明必須隨着該黃色地段及/或其任何部份之使用而生效，以令雙方之承繼者、代理人等均受其管制、約束及/或可因而得益或享用。

5. 獲權者負責支付本契約之印花稅、田土註冊費用，及相關法律費用。

6. 此契約價值不超逾港幣[redacted]。

謹此立約。

授權者：

CAI WEIMING
HKID# [redacted]

CAI XIUFENG
HKID# [redacted]

富偉實業有限公司

獲權者：

For and on behalf of
Tin Kwong Lun Yee Limited
天罡隆義有限公司

Authorised Signature(s)

YIP YUK PING, RITA
HKID# [redacted]

天罡隆義有限公司

見證者：

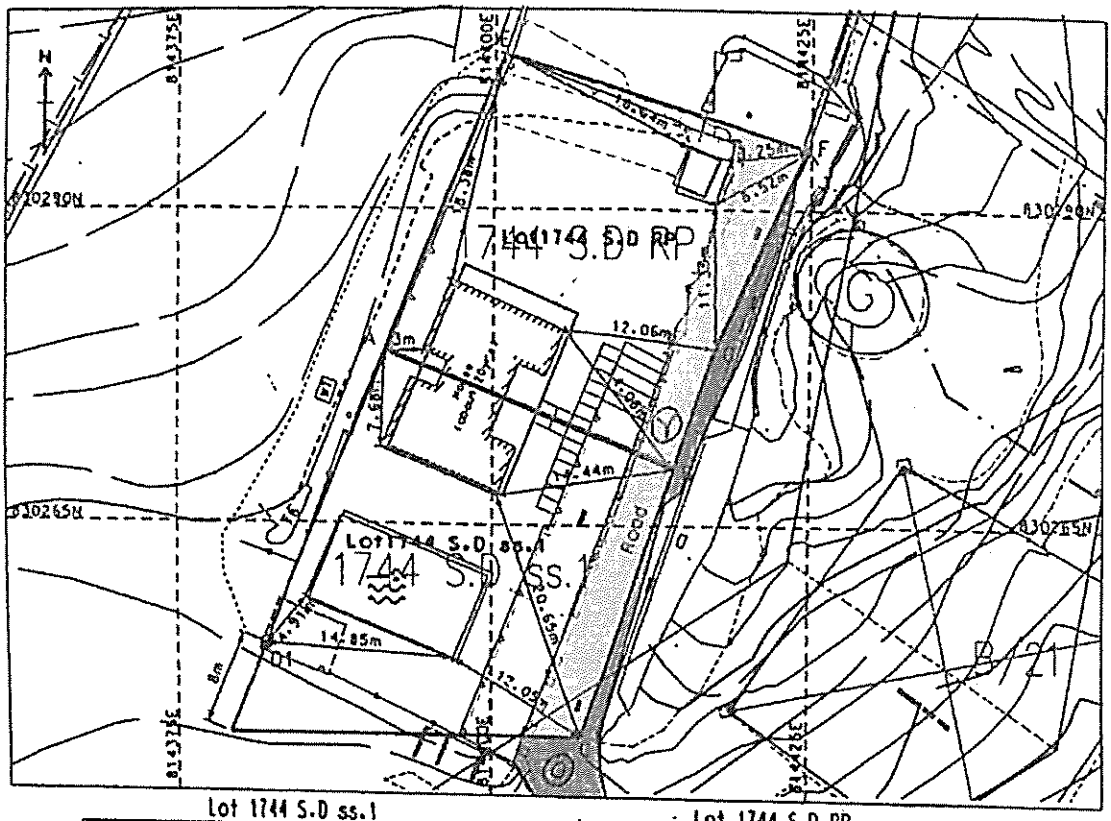
LAU TAK CHOI
Trainee Solicitors to
Messrs. Chan Ching Man & Co.,
Solicitors, Hong Kong SAR

I hereby verify the signature of LAU Tak Choi

Kan Johnny Chun Ho
Solicitor, HKSAR
Messrs. Chan Ching Man & Co.

附圖A

SETTING OUT PLAN
OF LOT No. 1744 S.D ss.1 & 1744 S.D RP in D.D.132, KWONG SHAN TSUEN, TUEN MUN



Lot 1744 S.D ss.1

Point	Northing (m)	Easting (m)	Mark
A	830278.811	814391.439	Nail
B	830269.555	814414.574	Nail
C	830247.933	814407.231	Nail
D1	830255.319	814382.182	Nail

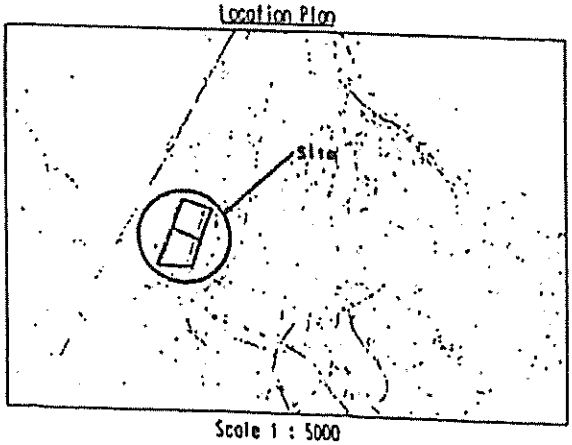
Survey Area: 716.7m² (About)

Lot 1744 S.D RP

Point	Northing (m)	Easting (m)	Mark
E	830302.406	814400.732	IRON SPIKE
F	830294.840	814424.873	Nail
G	830279.098	814417.717	Nail
B	830269.555	814414.574	Nail
A	830278.817	814391.439	Nail

Survey Area: 650.7m² (About)

Location Plan



Scale 1 : 5000

Survey District : TUEN MUN	Company Chop :
Date of Survey : MAY-2010	
Scale : 1 : 500	
Survey Sheet No. : 5-NE-25D	
Our Ref. : USMC-J0099	Plan No. : USMC/XA8126/132/1744-S0

滙測繪顧問有限公司
USMC Union Surveying & Mapping Consultancy Ltd.

光孝仙苑的土地範圍 (Y) - YELLOW

政府土地 (G) - ORANGE

註冊摘要編號 Memorial No. 18052902090017 A4C

Scanned with CamScanner

附圖B

LOT INDEX PLAN

天星路有限公司擁有(G) - GREEN

新界內-幸福邨範圍 (O) - ORANGE

政府公共道路 (Y) - YELLOW

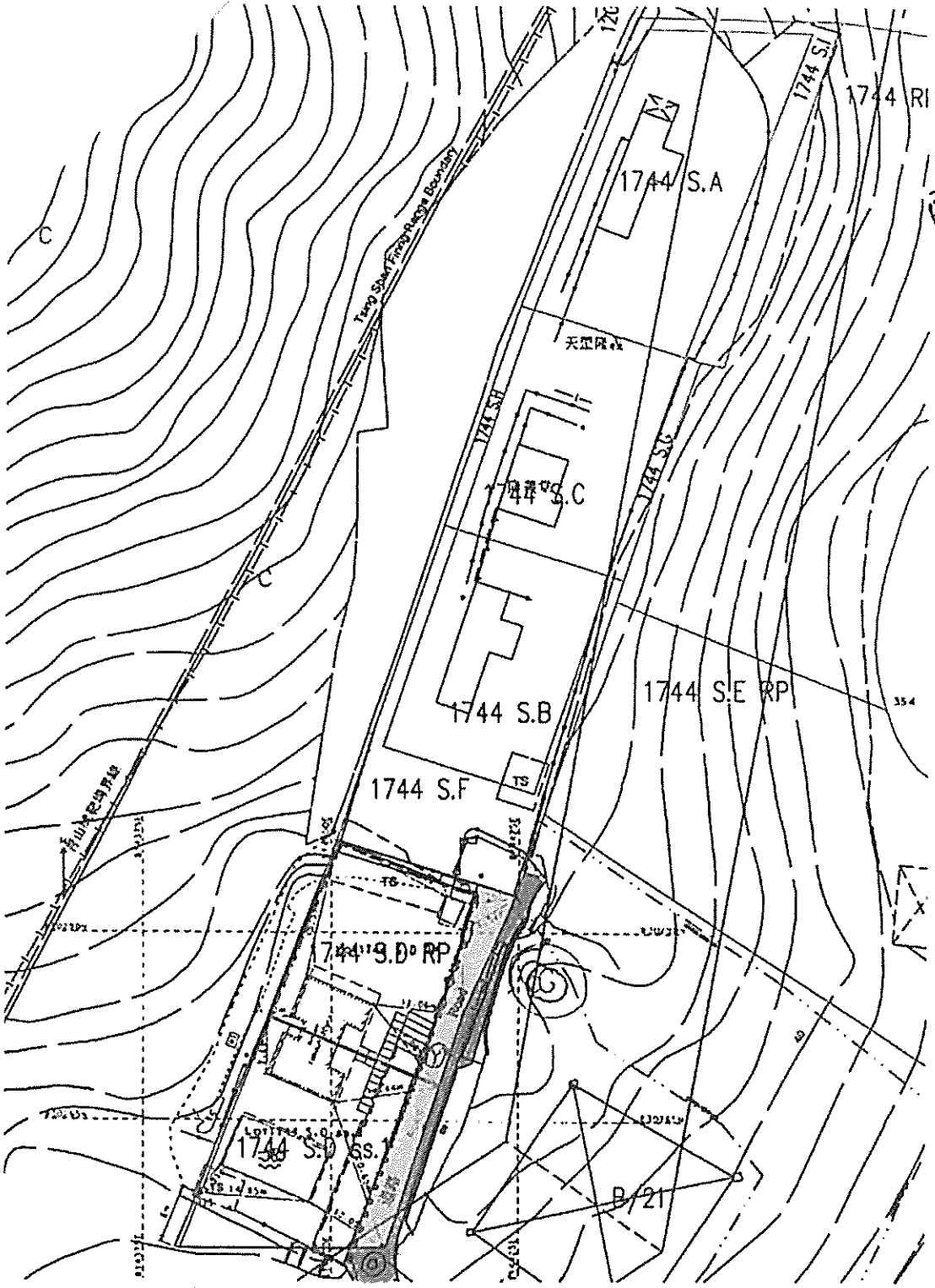
Plan produced by SMO, Lands Department
© Copyright reserved - Hong Kong SAR Government

SCALE 1:1000

Locality	DD132
Lot / Sec. / S.A. No.	[illegible]
District Survey Office	[illegible]
Date	[illegible]
Reference No.	[illegible]

註冊摘要編號 Memorial No.
18052902090017
A4C

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附圖C

Lot 1744 S.D ss.1

Point	Northing (m)	Easting (m)	Mark
A	830218.817	814391.435	Nail
B	830269.555	814414.574	Nail
C	830247.933	814431.231	Nail
D1	830255.319	814382.182	Nail

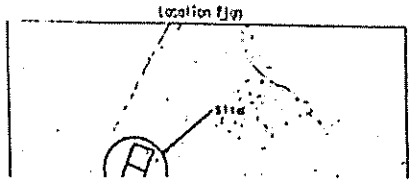
Survey Area: 716.7m² (About)

Lot 1744 S.D RP

Point	Northing (m)	Easting (m)	Mark
E	830302.408	814420.732	IRON SPIKE
F	830294.840	814424.813	Nail
G	830279.058	814417.717	Nail
B	830269.555	814414.574	Nail
A	830218.817	814391.435	Nail

Survey Area: 650.7m² (About)

Location Plan



Survey District :	TUEN MUN
Date of Survey :	MAY-2010
Scale :	1 : 500
Survey Sheet No. :	

Company Chop :

光孝仙苑的土地範圍
政府土地
Ⓨ - YELLOW
Ⓞ - ORANGE

Memorial No. 18052902090017
A4C
Scanned with CamScanner

契約立於 2018 年 5 月 18 日

富偉實業有限公司

及

天罡隆義有限公司

****

通路權契約

****

註冊摘要編號 Memorial No.:
18052902090017
本文書於2018年5月29日在土地註冊處
以上述註冊摘要編號註冊。
This instrument was registered in the Land Registry by the above Memorial No. on 29 May 2018.

土地註冊處處長
Land Registrar

— 陳靜文律師行 —
CHAN CHING MAN & CO.
SOLICITORS, AGENT FOR TRADE MARKS & PATENTS
香港中環德輔道中 121 號
遠東發展大廈 11 樓 1102 室
電話: 2689 0988 傳真: 2526 1518
檔號 CC/WR/1319-18

Landscape Assessment Report

Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lung Yee Temple at Lots Nos. 1744 S.A. – S.C. and 1744 S.F. – S.I. in D.D. 132, Tuen Mun

June 2019

Prepared by:

Blanc Design Studio

22/F Wofoo Commercial Building

574-576 Nathan Road, Mongkok,

Kowloon

CONTENT

1.0 Introduction

2.0 The Site and its Context

3.0 Landscape Proposal

3.1 Landscape Principle
3.2 Design Concept
3.3 Hard Material
3.4 Soil Depth for Planting
3.5 Irrigation
3.6 Barrier Free Access
3.7 Planting Proposal
3.8 Recommendation and Proposed Treatment of the Trees for the Road Improvement Proposal

ANNEX:

Annex A
Landscape Master Plan for the Application Site
Planting Plan for the Application Site

Annex B
Tree Survey for the Road Improvement Proposal
Tree Preservation and Felling Plan for the Road Improvement Proposal
Compensatory Planting Plan for the Road Improvement Proposal

1.0 Introduction

1.1 The application site covers Lots No. 1744 S.A. - S.C. and 1744 S.F. to S.I. in D.D. 132, Tuen Mun. It is currently zoned "Green Belt" on the Approved Tuen Mun Outline Zoning Plan (OZP) and occupied by a Pre-cut-off Columbarium named Tin Kwong Lung Yee with three existing buildings within the site.

1.2 The Applicant of the site has the intention to regularise the existing religious institution and columbarium development. In support of the rezoning application from "Green Belt" to "Government, Institution or Community" ("G/IC"), Blanc Design Studio is commanded to carry out assessment on the potential landscape impact and landscape proposal for the development.

1.3 Since there is a road improvement proposal to the access between the application site and Hing Fu Street Roundabout for car maneuvering and pedestrian walkway proposed by the traffic consultant, it may cause potential disturbances to the landscape character. Thus, a tree survey and assessment report has been prepared to present the findings of tree survey and assessment conducted in June 2019 and to identify individual trees affected by the proposed road. Strategies and criteria for tree preservation and protection, tree transplanting and compensatory planting are also outlined.

1.4 A more comprehensive package of proposals will be formulated during detailed design stage of the project.

2.0 The Site and its Context

2.1 There are three existing buildings in the application site and were built in the 1960s. The Applicant intends to retain the existing buildings for columbarium, management office, store room, toilet and religious worshipping use.

2.2 An aerial photo as shown in Figure 1 was taken in 1973, the site was covered by a large platform with three buildings and vehicular access road. Since the power pylon was constructed, all the residents have moved out and the site is deserted for 20 years.

2.3 An site photo as shown in **Figure 2** was taken before 2008. The majority of the site was covered by shrubs, the site condition has been improved.

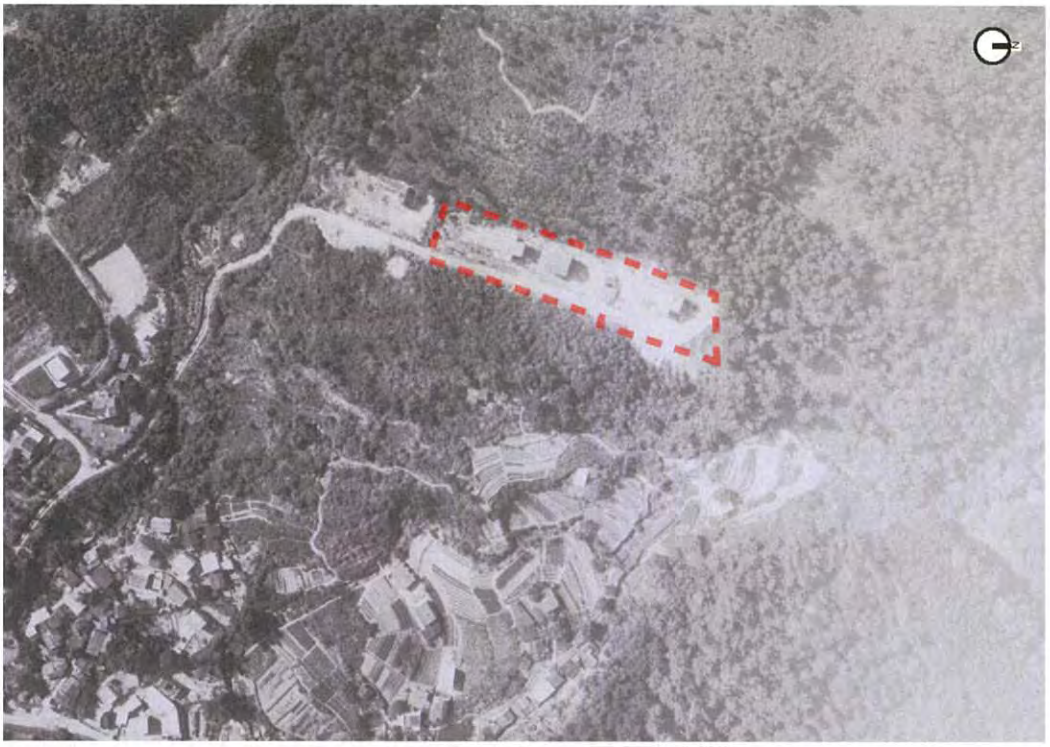


Figure 1: Aerial Photo of the application site in 1973



Figure 2: site photo was taken before 2008

2.4 To the northern boundary of the site, it is the Government slope which has turfed over the slope surface. The clearance of the mature trees in the area maybe was the decision of the Government. As noted, there are some charity organizations held the replanting scheme along the slope area. As a result, some trees are sapling planted along the slope.

3.0 Landscape Proposal

3.1 Landscape Principle

The aim of the landscape proposal is to respond to site conditions, building form and function and to provide a quality landscape scheme. The main factors to be taken into consideration are:

- Response to the site context, both in terms of landscape character and visual amenity.
- Response to the proposed building and its architectural style.
- Improve the landscape quality of the site in compatible with the surrounding Green Belt zone.
- Creation of a green setting by maximizing the opportunity for soft landscape.
- Enhancement of the arrival experience for users.

3.2 Design Concept

A Landscape Master Plan is prepared in **Annex A**. The landscape characters of the assessment area are a typical Chinese temple setting landscape. In order to enhance the proposed development to be compatible with the existing rural landscape character, landscape proposal will be provided as follows:-

Temple Landscape

The site has an area of 3,137m^2 with three existing low-rise and low-density buildings, which formed the major building component of the whole site. Moving from the south to the north part of the site, a series of spatial landscape gardens are designed in scattered areas. These areas accommodate more passive pursuits such as the proposed lawn and leisure sitting areas. The plantation of these gardens mixed up with various decent shrub and groundcover combination, which provide a good quality and increase the amenity and aesthetic value of the proposed religious and columbarium development.

The landscape and planting proposal seek to address the following objectives:

- Minimize the visual impact of the columbarium structure through a planting strategy by using delicate shrub and groundcover planting to create a green palette;
- Delineation western periphery, introducing tall bamboo planting act as

backdrop, which will form an effective green buffer to delineate the border edge of the proposed development to the green slope behind the site.

- Even though the development is located at the hillside. As Po Tin Estate situates at the East of the site, an overall buffering greening scene will be designed at the eastern periphery. It includes to introduce an avenue of mature trees along the eastern periphery so as to serve a strong green buffering effect.

3.3 Hard Materials

3.3.1 Hard materials will be selected to create paved areas. Flamed granite, traditional Chinese black brick paver, outdoor timber and concrete surface would be used for Paving on pedestrian pathway, leisure plaza and building entrance.

3.3.2 For kerb, planters and walls, precast concrete kerb will be proposed.

3.3.3 Summary of Hard Materials

Items	**Description**
Pedestrian Pathway	Chinese black brick paver, concrete surface
Building Entrance	Flamed Granite with feature pattern
Leisure Plaza	Flamed Granite in crazy paving pattern; Timber strip paving
Kerb	Precast concrete kerb

3.4 Soil Depth for Planting

The requirement of soil depth is directly related to the planting design. Since all planting areas are on open-slab planter, therefore, the general soil depth of minimize 1200mm depth shall be sufficient for all the plantings.

3.5 Irrigation

The proposed irrigation system will be provided by tap water pipe for manual operation. Lockable water points will be provided at 40m centres covering the entire site. The proposed source of water supply is subject to final approval from the Water Supplies Department.

3.6 Barrier Free Access

The landscape design should take into account of the provisions leading to better and more convenient access and facilities for all its intended users. Design requirements as recommended in "The Design Manual: Barrier Free Access 2008" by Building Department would be followed and incorporated in the landscape design, and make sure all visitors, especially disabled users, can reach their target place with no obstacles.

3.7 Planting Proposal

A Planting Plan for the application site is prepared in **Annex A**. In order to provide quality landscape for the proposed development, soft landscape works will be the major landscape element of the landscape proposal and the following factors are taken into consideration in planting species selection:

- Low maintenance requirement;
- Evergreen with small amount of leave fall to prevent litter accumulation;
- Tolerance to wind and exposed condition;
- To screen the proposed buildings and reduce the visual impact to the nearby residents.

3.7.1 With the aim of providing greenery buffering to the eastern periphery, row of mature tree species are introduced. (e.g. Cinnamomum burmannii 陰香, Delonix regia 鳳凰木, Magnolia grandiflora 荷花玉蘭, Michelia x alba 白蘭,)

3.7.2 Proposed Tree Planting: The landscape proposal seeks to maximize the opportunities for planting within the entire works area. The planting list is as follows:

Table 1: Planting Schedule

Tree Code	Botanical Name	Chinese Name	Size (mm) Height x Spread x DBH	Qty.
Cin bur	Cinnamomum burmannii	陰香	4500 x 4000 x 125	19
Del reg	Delonix regia	鳳凰木	4500 x 4000 x 125	2
Mag gra	Magnolia grandiflora	荷花玉蘭	3000 x 2500 x 100	2
Mic alb	Michelia x alba	白蘭	3000 x 2200 x 100	1

3.7.3 Under the boundary area, the proposed scheme aims at keeping the site in a high amenity value, and creating a greenery scene to merge with the vegetation surrounding. Thus, **24 nos.** of trees are proposed for the site.

3.7.4 The total green area in this development is approximately **959m^2** which is approximately 30.6% of the total site area.

3.9 Recommendation and Proposed Treatment of the Trees for the Road Improvement Proposal

3.9.1 According to the tree survey in **Annex B**, there is 9 nos. of trees which are directly conflicted with the proposed road improvement proposal outside the application site. In view of the form and amenity value of those trees are low, they are recommended to be felled. With the aim to compensate for those trees to maintain the present greenery scenery, it is recommended to plant 17 nos. of Bauhinia blakeana to the opposite location. A Tree Preservation and Felling Plan and a Compensatory Planting Plan are prepared in **Annex B**.

3.9.2 Compensatory Planting List

Botanical Name	Chinese Name	Size (mm) Height x Spread x DBH	Qty.
Bauhinia blakeana	洋紫荊	4500 x 4000 x 120	17

3.9.3 According to DEVB TC(W) No. 10/2013, stating that "planting should be of a ratio not less than 1:1 in terms of number....", "... additional planting to achieve the compensatory planting ration of 1:1 in terms of aggregated DBH...". From this compensatory scheme,

Number of tree to be felled: 9 nos. (a)
Accumulated lost in DBH: 1971mm (b)
Proposed no. of compensatory tree: 17 nos. (c)
Accumulated DBH for compensatory tree: 2040mm (d)
Quantity Compensation Ratio (c) / (a) = 1: 1.89
DBH Compensation Ratio (d) / (b) = 1: 1.03

Annex A

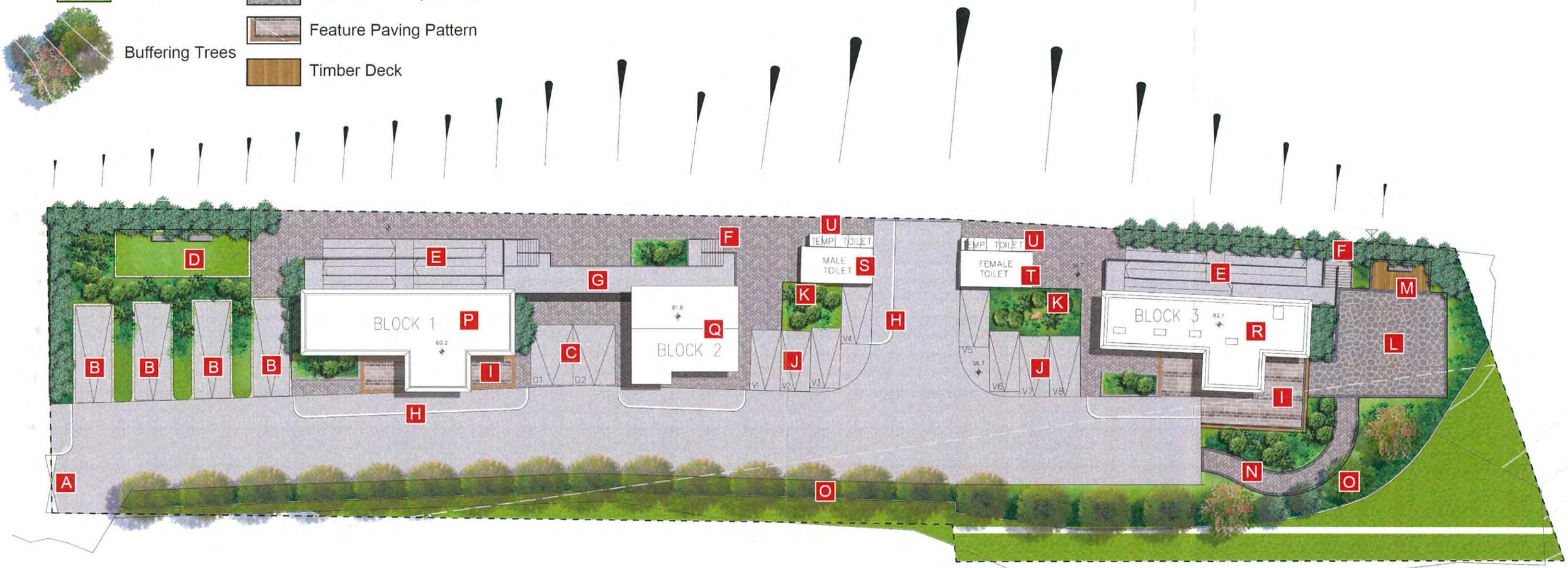
Landscape Master Plan for the Application Site
Planting Plan for the Application Site

LEGENDS

- Bamboo
- Shrub & Groundcover
- Lawn
- Buffering Trees
- Concrete Paving
- Conc. Block Paver
- Granite in Crazy Pattern
- Feature Paving Pattern
- Timber Deck

Total Site Area: 3137m^2

Landscape Green Area: 959m^2 (30.6%)



A Application Site Entry
B Shuttle Bus Bays
C Carpark reserved for Visitor (Disabled)
D Open Lawn Area
E Access Ramp to Upper Level
F Staircase to Upper Level
G Upper Level Viewing Terrace
H EVA WITH WHITE LINE MARKING
I Feature Paving to Building Entry
J Carpark reserved for Staff / Visitor
K Leisure Garden
L Multi function Plaza
M Timber Deck (Leisure Area)
N Pedestrian Path
O Buffering Trees Row
P Block 1 - Columbarium
Q Block 2 - Columbarium and management office
R Religious use and Columbarium
S Male Toilet
T Female Toilet
U Container Toilets

Rezoning Application from "GB" to "G/IC" for a Religious Institution
at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D.132, Tuen Mun

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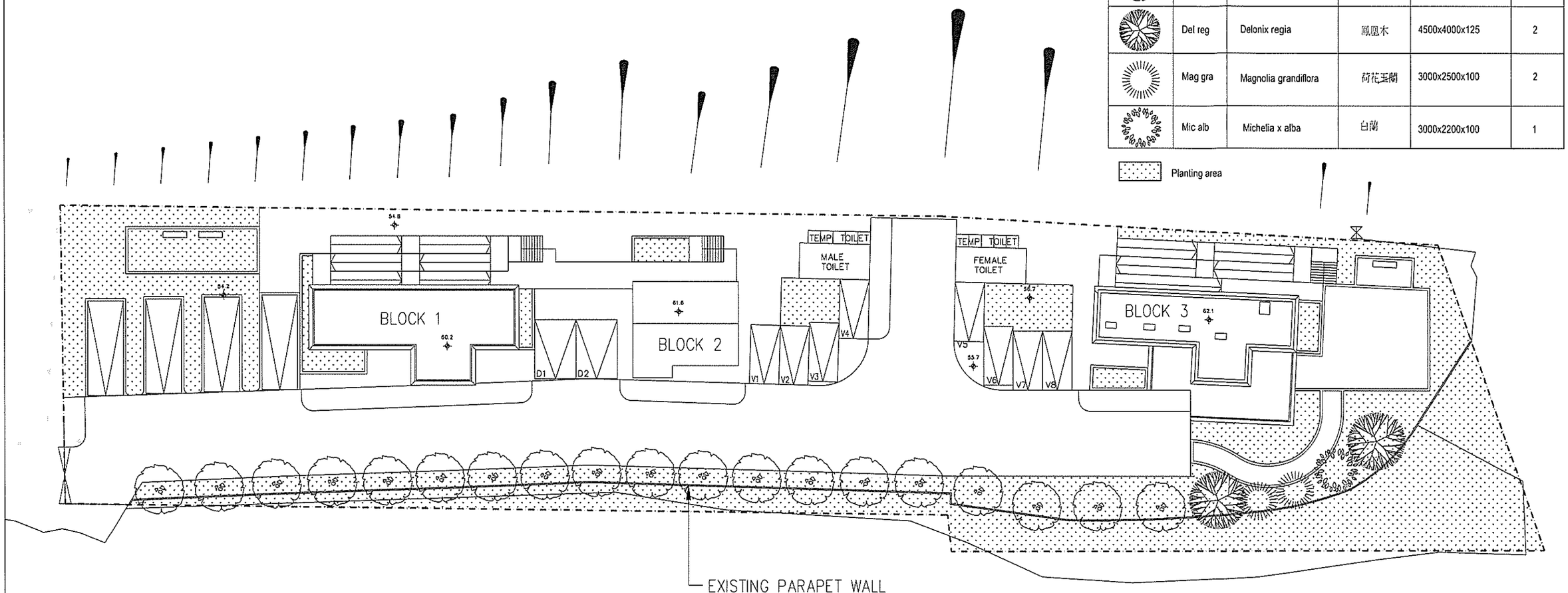
LANSCAPE MASTERPLAN

BLANC DESIGN STUDIO

Proposed Planting List

Tree symbol	Tree Code	Botanical Name	Chinese Name	Size (mm) Height x Spread x DBH	Quantity
	Cin bur	Cinnamomum burmannii	陰香	4500x4000x125	19
	Del reg	Delonix regia	鳳凰木	4500x4000x125	2
	Mag gra	Magnolia grandiflora	荷花玉蘭	3000x2500x100	2
	Mic alb	Michelia x alba	白蘭	3000x2200x100	1

Planting area



Rezoning Application from "GB" to "G/IC" for a Religious Institution
at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D.132, Tuen Mun

N

0 5 10 20

PLANTING PLAN

BLANC DESIGN STUDIO

Annex B

Tree Survey for the Road Improvement Proposal

Tree Preservation and Felling Plan for the Road Improvement Proposal

Compensatory Planting Plan for the Road Improvement Proposal

Project Title: Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee at Lots Nos. 1744 S.A. – S.C. and 1744 S.F. -- S.I. in D.D. 132, Tuen Mun
Tree Assessment Schedule

Inspection Conducted by: Wong Yun Keung, Beavis (ISA-CA/TRAQ no. HK-0007AUM, HKILA-ArbP no. AAP024, AA-TechArbor no. TE4188)
Date of Inspection: 2 June 2019

Date of Inspection: 2 June 2019

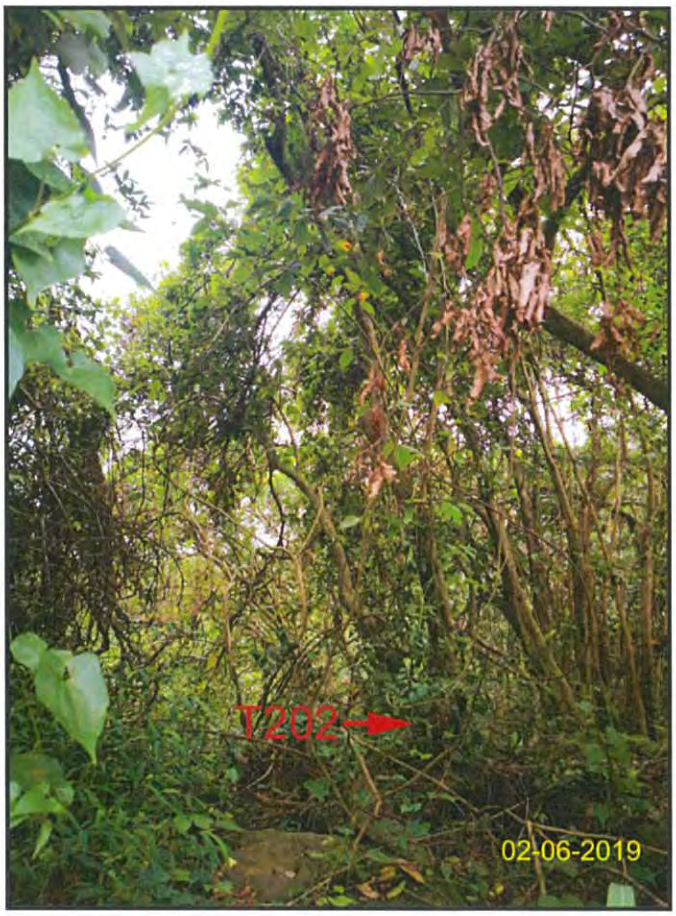
Item	Tree No.	Tree species		Tree size			Health (Good/ Fair/ Poor)	Form (Good/ Fair/ Poor)	OVT/ Potential OVT (Yes /No)	Protected by Cap 96/ Cap 586 (Yes /No)	Amenity value (High/ Medium/ Low)	Anticipated survival rate after transplanting value (High/ Medium/ Low)	Recommendation	Justification	Remarks on tree characteristic
		Scientific Name	Chinese Name	Height (m)	Spread (m)	DBH (mm)									
1	T201	*Microcos nervosa*	布渣葉	6	5	144	Fair	Poor	No	No	Low	Low	Fell	Conflict with the proposed lay-by location	*Multiple trunk, Vined*
2	T202	*Microcos nervosa*	布渣葉	6	4	152	Fair	Poor	No	No	Low	Low	Fell	Conflict with the proposed lay-by location	*Leaning, Forked, Vined*
3	T203	*Microcos nervosa*	布渣葉	6	3	100	Fair	Poor	No	No	Low	Low	Fell	Conflict with the proposed lay-by location	*Leaning, Vined*
4	T204	*Litsea glutinosa*	潺槁	5	4	120	Fair	Poor	No	No	Low	Low	Fell	Conflict with the proposed lay-by location	Broken leader, Unbalanced form, Vined
5	T205	*Microcos nervosa*	布渣葉	4	4	235	Poor	Poor	No	No	Low	Low	Fell	Conflict with the proposed lay-by location	Multiple trunk, Dieback, Vined
6	T209	*Dimocarpus longan*	龍眼	11	8	320	Fair	Poor	No	No	Low	Low	Fell	Conflict with the proposed lay-by location	*Broken branches*
7	T210	*Dimocarpus longan*	龍眼	10	9	300	Fair	Poor	No	No	Low	Low	Fell	Conflict with the proposed lay-by location	*Unbalanced form*
8	T214	*Dimocarpus longan*	龍眼	10	9	380	Fair	Poor	No	No	Low	Low	Fell	Conflict with the proposed lay-by location	*Broken branches*
9	T217	*Macaranga tanarius var. tomentosa*	血桐	7	4	220	Fair	Poor	No	No	Low	Low	Fell	Conflict with the proposed lay-by location	Leaning, Trunk decay, Borers, Epicormics, Vined



T201 Overview



T201 Root Crown Condition



T202 Overview



T202 Root Crown Condition



T203 Overview



T203 Root Crown Condition



T204 Overview



T204 Root Crown Condition

Additional Passing Bay Proposal to the Access Road of Tin Kwong Lun Yee
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee
at Lots Nos. 1744 S.A. – S.C. and 1744 S.F. – S.I. in D.D. 132, Tuen Mun



T205 Overview



T205 Root Crown Condition



T209 Overview



T209 Root Crown Condition

Additional Passing Bay Proposal to the Access Road of Tin Kwong Lun Yee
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee
at Lots Nos. 1744 S.A. – S.C. and 1744 S.F. – S.I. in D.D. 132, Tuen Mun



T210 Overview



T210 Root Crown Condition



T214 Overview



T214 Root Crown Condition

Additional Passing Bay Proposal to the Access Road of Tin Kwong Lun Yee
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee
at Lots Nos. 1744 S.A. – S.C. and 1744 S.F. – S.I. in D.D. 132, Tuen Mun



T217 Overview



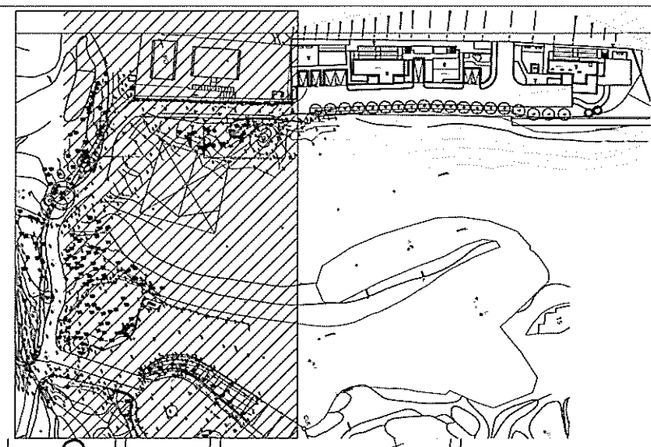
T217 Root Crown Condition

LEGEND

28.79	EXISTING LEVEL
36.58	HIGHLIGHT EXISTING LEVEL
	TREE TO BE RETAINED
T201	TREE TO BE FELLED

N

KEY PLAN N.T.S.



Access Road

Additional Passing Bay

Additional Passing Bay

6.9m Light Bus

T201 T202 T203 T204 T205 T206 T207 T208 T209 T210 T211 T212 T213 T214

Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee
at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D.132, Tuen Mun
Additional Passing Bay Proposal to the Access Road of TWLY

SCALE 1:400

TREE PRESERVATION AND FELLING PLAN

LEGEND

28.79 EXISTING LEVEL

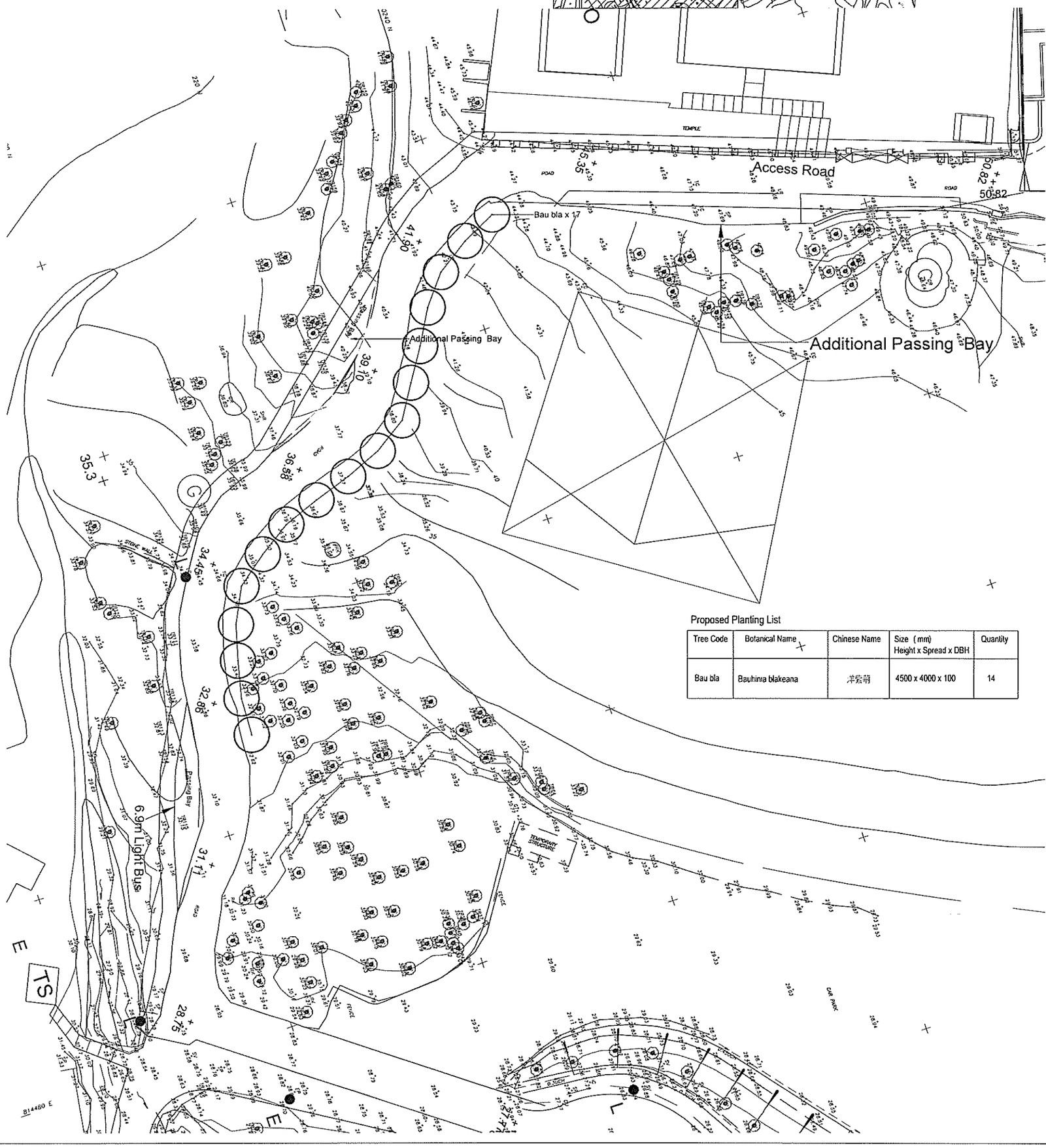
36.58 HIGHLIGHT EXISTING LEVEL

TREE TO BE RETAINED

NEW TREE PLANTING

N

KEY PLAN N.T.S.



Proposed Planting List

Tree Code	Botanical Name	Chinese Name	Size (mm) Height x Spread x DBH	Quantity
Bau bla	Bauhinia blakeana	洋紫荊	4500 x 4000 x 100	14

Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee
at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D.132, Tuen Mun
Additional Passing Bay Proposal to the Access Road of TKLY

SCALE 1:400

COMPENSATORY PLANTING PLAN

OZZO TECHNOLOGY

Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee at Lot Nos. 1744 S.A. – S. C. and 1744 S.F. – S.I. in D.D. 132, Tuen Mun New Territories

Traffic Impact Assessment Study
Final Study Report
June 2019

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OZZO TECHNOLOGY

Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee at Lot Nos. 1744 S.A. – S. C. and 1744 S.F. – S.I. in D.D. 132, Tuen Mun New Territories

Traffic Impact Assessment Study
Final Study Report
June 2019

Contents Amendment Record

This report has been issued and amended as follows:

Revision	Description	Prepared/ Date	Checked/ Date	Approved / Date
0	Final Study Report	MM 19/05/2019	JL 22/05/2019	OC 27/05/2019
0b	Final Study Report	MM 24/06/2019	JL 24/06/2019	OC 25/06/2019

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APPENDICES

Appendix A 2018 Junction Calculation Sheets
Appendix B Swept Path Assessment Results
Appendix C 2028 Junction Calculation Sheets

1 INTRODUCTION

1.1 Background

1.1.1 The Applicant applies for rezoning planning approval, from "GB" to "G/IC", for a religious institution and columbarium in Tin Kwong Lun Yee at Lot Nos. 1744S.A. – S.C. and 1744S.F. – S.I. in D.D. 132, Tuen Mun (hereafter referred as the "Application Site").

1.1.2 The Applicant intends to a pre-cut-off columbarium (hereafter referred as the "Proposed Development") with a total of 11,094 niches.

1.1.3 Ozzo Technology (HK) Limited has been commissioned to undertake a Traffic Impact Assessment (TIA) Study, to assess the traffic impact to be induced by the Proposed Development on the road network in the vicinity of the Application Site and to devise appropriate traffic and crowd management plan during grave sweeping festival periods.

1.2 Study Objectives

1.2.1 The objectives of the TIA study are as follows:

- To review the existing traffic situation of the surrounding road network during grave sweeping festival period;
- To estimate the traffic generations/attractions to be induced by the Proposed Development during grave sweeping festival periods;
- To assess the future traffic situation of the surrounding road network during grave sweeping festival periods;
- To appraise the potential traffic impact of the Proposed Development on the surrounding road network during grave sweeping festival periods;
- To recommend traffic and crowd management and control plans to be implemented during grave sweeping festival periods.

1.3 Report Structure

1.3.1 Following this introductory chapter, this report is arranged as follow:

- Chapter 2 summarizes the existing traffic condition in the vicinity of the Application Site during grave sweeping festival periods;
- Chapter 3 describes the Proposed Development;
- Chapter 4 provides the forecast traffic to be generated by the Proposed Development;
- Chapter 5 describes the proposed Crowd Management Plan to be implemented during peak grave sweeping festival days;
- Chapter 6 describes the traffic impact assessment approach and reports the assessment results; and
- a summary of the findings and conclusion of this TIA study are given in Chapter 7.

2 EXISTING TRAFFIC SITUATION

2.1 Site Location and Study Area

2.1.1 The Application Site is located at Lot Nos. 1744S.A. – S.C. and 1744S.F. – S.I. in D.D. 132, Tuen Mun as shown in **Figure 2-1**.

2.1.2 **Figure 2-2** shows the proposed Study Area for this TIA study. As shown in the figure, the Site can be accessed via a single track access road which connects with Hing Fu Street near Kwong Shan Tsuen. Hing Fu Street is a local access road in single-2 lane standards. The road connects with Hing Kwai Street, a Local Distributor Road, for access to other parts of Tuen Mun District via Tsun Wen Road and Ming Kum Road, both are District Distributor Roads serving the developments in Tuen Mun North.

2.1.3 The proposed Study Area covers the key junctions and road links along the major vehicular routes to be used by the traffic to be induced by the Proposed Development.

2.2 Public Transport Services

2.2.1 **Figure 2-3** shows the existing public transport provisions in the vicinity of the Application Site with details of the public transport services summarized in **Table 2-1**.

Table 2-1 Existing Bus and GMB Services

Route No.	Terminating Points		Remarks
Franchised Bus Services			
58M	Leung King Estate	Kwai Fong Station	Daily services every 3-12 mins
58P	Kwai Fong Station	Tin King Estate	Mon to Sat at PM peak
58X	Leung King Estate	Mong Kok East Station	Daily services every 5-15 mins
258D	Po Tin	Lam Tin Station	Daily services every 6-20 mins
258S	Shan King Bus Terminus	Lam Tin Station	Mon to Sat at AM peak
258X	Po Tin	Kwun Tong Ferry	Mon to Fri at 7:35am and 6:05pm
260X	Po Tin	Hung Hom Station	Daily services every 6-15 mins
960	Kin Sang Bus Terminus	Wan Chai North	Daily services every 4-20 mins
960A	Central	Hung Shui Kiu (Hung Fuk Estate)	Mon to Fri at 6:30pm
960B	Quarry Bay	Hung Shui Kiu (Hung Fuk Estate)	Mon to Fri at PM peak
960X	Hung Shui Kiu (Hung Yuen Road)	Quarry Bay (King's Road)	Mon to Fri at AM peak
961P	Leung King Estate	HK Convention Centre	Mon to Fri at 7:35am
B3A	Shan King Estate	Shenzhen Bay Port	Daily services every 20-35 mins
E33P	Siu Hong Station	Airport (Ground Transportation Centre)	Daily services every 12-45 mins
K58	Fu Tai Estate	Castle Peak Bay Bus Terminus	Mon to Sat at AM and PM peak
Green Minibus Services			
40	Siu Hang Tsuen	Tuen Mun Town Centre	Daily services every 13 mins
44A	Tuen Mun Station	Sheung Shui Statoin	Daily services every 2-3 mins
44A1	Po Tin Estate	Sheung Shui Station	Mon to Sat every 20-25 mins
44B	Tuen Mun Station	Lok Ma Chau Public Transport Interchange	Daily services every 15 mins
Light Rail Route			
505	Sam Shing	Siu Hong	Daily services every 5-14 mins
507	Tuen Mun Ferry Pier	Tin King	Daily services every 5-15 mins
615	Tuen Mun Ferry Pier	Yuen Long	Daily services every 10-23 mins
615P	Tuen Mun Ferry Pier	Siu Hong	Daily services every 10-23 mins

2.3 Existing Traffic Conditions

2.3.1 To reveal the existing traffic conditions in the Study Area during the grave sweeping festival periods, traffic count surveys were undertaken at the key locations within the Study Area during Chung Yeung Festival in 2018 (17th October 2018) over the time period of 09:00 – 17:00. The locations of the traffic surveys are shown in **Figure 2-4**.

2.3.2 All vehicular flows in the subsequent analysis are converted to passenger car unit (PCU) based on the PCU factors for signal and priority traffic according to Table 2.3.1.1 of Volume 2 of "Transport Planning and Design Manual" (TPDM) as shown in **Table 2-2**.

Table 2-2 Passenger Car Unit Conversion Factors

	PCU Conversion Factor	
	Traffic Signal	Priority
Car / Taxi	1.00	1.00
Public Light Bus / Minibus	1.50	1.50
Light Goods Vehicle	1.50	1.50
Medium/ Heavy Goods Vehicle	1.75	2.80
Bus / Coach	2.00	2.80

2.3.3 By applying the above PCU factors, the hourly vehicular traffic flows in PCUs are calculated and the peak hour is identified to occur at 11:30 – 12:30. **Figure 2-5** shows the 2018 Chung Yeung Peak Hour Observed Flows.

2.3.4 Based on the observed peak hour traffic flows, the performances of the key junctions in the Study Area are assessed. The results are summarized in **Table 2-3** and detailed junction capacity calculation sheets are given in **Appendix A**.

2.3.5 For signal-controlled junctions, the reserve capacity index, R.C. is calculated based on Current cycle time in accordance the methods stated in Chapter 2.4 of Volume 4 TPDM.

Table 2-3 2018 Chung Yeung Festival Peak Hour Junction Performance

Ref No.	Junction Location	Junction Type	Capacity Index (1)	17/10/2018 Chung Yeung
J1	Hing Fu Street	Roundabout	DFC(1)	0.02
J2	Hing Kwai Street / Tong Hang Street / Hing Fu Street	Priority	DFC	0.08
J3	Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	Signal	R.C. (2)	100%+
J4	Tsun Wen Road / San Fuk Road	Priority	DFC	0.03
J5	Tsun Wen Road / Leung Wan Street	Signal	R.C.	65.6%
J6	Tsing Lun Road / Tsun Wen Road	Signal	R.C.	100%+
J7	Tsing Lun Road / Tsing Chung Koon Road	Signal	R.C.	100%+
J8	Tin King Road / Ming Kum Road	Signal	R.C.	100%+
J9	Tsing Tin Road / Ming Kum Road	Signal	R.C.	100%+
J10	Tsing Lun Road / Access to Tuen Mun Hospital	Priority	DFC	0.32
J11	Lam Tei Interchange	Roundabout	DFC	0.50
J12	Tsing Lun Road / Hong Po Road	Roundabout	DFC	0.39

Notes: (1) DFC = Design Flow to Capacity ratio.
(2) R.C. = Reserve Capacity under Current cycle time

2.3.6 The results of the assessment shown in **Table 2-3** indicate that the reserve capacities (RC) of all signal-controlled junctions are greater than 15% and the design flow to capacity (DFC) ratio of all priority and roundabout junctions are less than 0.85, i.e. all the key junctions within the Study Area operate satisfactorily during the peak hour of 2018 Chung Yeung Festival.

3 THE PROPOSED DEVELOPMENT

3.1 The Proposed Development

3.1.1 **Figure 3-1** shows the master layout plan of the Proposed Development. It is proposed to provide a total of 11,094 niches within the columbarium.

3.1.2 **Figure 3-1** also shows the proposed provisions of internal transport facilities within the Proposed Development and which include 2 accessible parking spaces for visitors and 8 private car spaces for staff/ visitors and 4 bays for the proposed shuttle bus services. The private car spaces will be available for staff / visitors on normal day only. They will be closed during Ching Ming and Chung Yeung Festival.

3.1.3 Results of vehicle swept path assessments within the Proposed Development are presented in **Appendix B**.

3.1.4 Also, during grave sweeping festival periods, management staff will be stationed at key locations to assist pedestrians and motorists as appropriate. Detailed Crowd Management Plan will be discussed in Chapter 4.

4 CROWD MANAGEMENT PLAN

4.1 Admission Control

4.1.1 The Columbarium is a private property in which only niche owners and their family members with proofs of memberships are allowed to enter the Columbarium. The purchasers of the niches inside the Columbarium are members of the Columbarium. Other visitors will only be allowed to access the Columbarium when leaded and permitted by the staff of the Columbarium.

4.1.2 The Sale Agreement for the purchase of niche will include a set of House Rules. The House Rules are to regulate the conduct of the visitors in the use of the niches including the information on shuttle bus services, parking and traffic arrangement during Ching Ming and Chung Yeung Festival periods.

4.2 Visit by Appointment System on peak Grave Sweeping Days

4.2.1 During Ching Ming and Chung Yeung festival periods (i.e. two weekends immediately before festive days to the weekend after festive days), Visit-By-Appointment system will be implemented to control the number of visitors entering the Columbarium. Booking by telephone, SMS, WhatsApp and Email will be available for all members once the Visit-By-Appointment system is activated. Each member and their accompanies has to reserve a place via the Visit-By-Appointment system on a first-come first-serve basis prior to their visits to the Columbarium. Via the Visit-By-Appointment system, members will be informed of the following information:

- Visit date;
- Admission time (one-hour slot);
- Total nos. of visitors permitted during the visit;

- For visitors apply for shuttle bus services, shuttle bus permits which show the assigned pick-up time of shuttle bus services and location of pick up point will be given.

4.3 Proposed Shuttle Bus Services

4.3.1 To minimise the amount of vehicular traffic and in line with the Government Policy to encourage public transport use with railway as the backbone, the Applicant proposes to provide the following free shuttle bus services for visitors to the Proposed Development during grave sweeping festival periods (Ching Ming / Chung Yeung Festivals and two weekends before and after Ching Ming Festival / Chung Yeung Festivals):

- Destinations:

  The Proposed Development - MTR West Rail Siu Hong Station (North) general layby (Circular)

- Routeing (**Figure 4-1**):

  Bus bay inside the Proposed Development, Hing Fu Street, Hing Kwai Street, Ming Kum Road, Tsing Tin Road, Tuen Mun Road, Lam Tei Interchange, Siu Hong Station (North) general layby, Lam Tei Interchange, Tuen Mun Road, Tsing Tin Road, Ming Kum Road, Hing Kwai Street, Hing Fu Street, Bus bay inside the Proposed Development.

- Stopping Places for Pick Up/Set Down:

  1. Bus bay inside the Proposed Development (**Figure 3-1**)
  2. General lay-by at MTR West Rail Siu Hong Station (North) (**Figure 4-2**)

- Departure times/ Service Frequency:

  08:00 – 17:00 Every 2.5 - 3 min.

- Fares:

  Free of charge.

4.4 Crowd Management within the Columbarium during peak Grave Sweeping Days

4.4.1 A total of 47 management staff/ security guards will be deployed and assigned to designated locations to regulate and manage the the proposed columbarium area, ensuring the smooth operation of the crowd management plan.

4.4.2 The manpower deployment plan and corresponding major duties are summarized in **Table 4-1**.

Table 4-1 Manpower Deployment Plan during Peak Grave Sweeping Days

Location	No. of Management Staff	No. of Security Guards	Major Duties
At Admission Office	2	0	• Act as command center to ensure smooth operation of management plan. • Daily operational needs and First aid services
Main entrance of Tin Kwong Lun Yee	1	2	• Register and implement the admission control system. • Monitor and control for in-coming shuttle buses/ private car with disabled/ elderly.
Along the Local Access Road connecting the Columbarium and Hing Fu Street	2	4	• Assist and guide the vehicles and pedestrian to ensure road safety along access road.
Holding Area in front of the 3 Columbarium Blocks	3	6	• Regulate and manage the queueing of visitors and implement admission control of each columbarium block. • Register and give priority to visitors with advance E-booking.
At Shuttle Bus Bays	2	4	• Direct and give guidance for the shuttle buses parking activities, as well as passengers boarding and alighting activities. • Regulate and manage passengers queuing for shuttle bus services.

Location	No. of Management Staff	No. of Security Guards	Major Duties
At Private Car Park Area	1	2	• Assist and direct the drivers to ensure vehicles parking are conducted in a safe condition.
Inside the columbarium blocks	0	6 (One at each hall)	• Monitor the worshipping activities to ensure clean environment. • Direct and guide the visitors coming and leaving the columbarium halls.
In front of the columbarium blocks	0	3 (One at each block)	• Monitor the visitors accessing the columbarium halls to ensure smooth pedestrian movement.
Behind the columbarium Blocks (Rear Platforms and ramps)	2	3	• Monitor and direct the leaving visitors to ensure smooth pedestrian movement.
General Lay-by at West Rail Siu Hong Station	2	2	• Verify the validity of visitors. • Regulate and control visitors queuing for shuttle bus services
Total	15	32	

4.4.3 The management staff/ security guards will station at the assigned locations to assist members within the columbarium site to undertake the worship activities in a safe and orderly manner.

4.4.4 As shown in **Figure 4-2**, management staff/security guards will be assigned to station at the general lay-by in West Rail Siu Hong Station to regulate and control passenger queuing at the lay-by and only visitors with valid proof of booking confirmation could be allowed to use the free shuttle bus service.

5 ESTIMATED TRIP GENERATIONS BY PROPOSED DEVELOPMENT

5.1 Person Trip Generations during Ching Ming Festival

5.1.1 In order to estimate the amount of development traffic to be generated by the Proposed Development, references are made to the daily person trips observed at a private columbarium development at To Fung Shan in Tai Wai during 2018 Ching Ming Festival. Similar to the Proposed Development, the referenced columbarium is a private columbarium development situated at the upper level of a hilly terrain. During Ching Ming and Chung Yeung Festival periods, free shuttle bus services between MTR Tai Wai Station and the columbarium site are provided over the operation hours between 08:00 – 17:00 based on an Appointment System. Visitors are required to make an appointment and reserve a place for the shuttle bus service before their visit to the columbarium during peak grave sweeping festival days.

5.1.2 **Table 5-1** shows the amount of daily person trips entering and leaving the columbarium by different modes over the time period of 08:00 – 17:00 during 2018 Ching Ming Festival. Based on the observed trip rates. Based on these, the amount of daily person trips by the Proposed Development are also estimated.

Table 5-1 Observed and Forecast Daily Person Trips during Ching Ming Festival

	Shuttle Bus		Car/Taxi		Total	
	In	Out	In	Out	In	Out
Surveyed Columbarium with around 3,000 niches						
Observed Daily Visitor flows (persons/day)	1,467	1,493	41	2	1,508	1,495
Trip Rates (persons/niche/day)	0.4890	0.4977	0.0137	0.0007	0.5027	0.4983
Proposed Development with 11,094 niches						
Forecast Daily Visitor flows (persons/day)	-	-	-	-	5,577	5,529

5.1.3 **Table 5-1** indicates that a daily demand of around 5,577 visitors are anticipated during the Ching Ming Festival, i.e. an average of 620 visitors per hour between 08:00 and 17:00. Hence, an hourly limit of 620 visitors will be assigned, i.e. 5,580 visitors per day, which would be sufficient to cope with the daily demand on Ching Ming Day.

5.2 Estimated Person and Vehicle Trip Generations by Different Modes

5.2.1 As shown in **Table 5-1**, around 97.3% of the daily person trips use the free shuttle bus services for entering and leaving the surveyed columbarium in Tai Wai during Ching Ming Festival Day. Out of the remaining 2.7% of daily trips, only one car trip was recorded and all others are taxi trips.

5.2.2 Similar to the surveyed columbarium, the Applicant propose to provide free shuttle bus services by an Visit-by-Appointment System. It is also noted that, while there are only a few occupied niches at present, the existing visitors access the site by public transport as there is no free shuttle bus services at present. Taking into account the above factors, the following modal splits for visitors accessing the proposed development are assumed:

Mode	Percent
Shuttle Bus	95%
Car/Taxi	3%
Public Transport/Walk	2%
Total	100%

5.2.3 Based on the assumed modal splits, the amount of visitors by different modes are summarised in **Table 5-2**. The visitor flows are converted to vehicle flows based on the vehicle occupancy of respective modes as indicated in **Table 5-2**.

Table 5-2 Estimated Ching Ming Peak Hour Person and Vehicle Flows by Proposed Development

Mode	In			Out		
	Visitors/hour	veh/hour	PCU/hour	Visitors/hour	veh/hour	PCU/hour
Shuttle Bus(1)	590	25	38	590	25	38
Car/Taxi(2)	21	6	6	21	6	6
Public Transport /Walk	13	-	-	13	-	-
Total	**680**	**31**	**44**	**680**	**31**	**44**

Notes: (1) Based on 24-seat shuttle bus
(2) Based on average occupancy of 3.5 persons per vehicle.

5.2.4 As indicated in **Table 5-2**, it is estimated that the Proposed Development would general a total of 88 pcu's (44 in and 44 out) during the peak hour of Ching Ming Festival.

6 TRAFFIC IMPACT ASSESSMENT

6.1 Assessment Approach

6.1.1 It is anticipated that all the 11,094 niches within the Proposed Development would be fully occupied by 2025, hence, the assessment year for this traffic impact assessment study is set as 2028, which is 3 years from the year of full occupation.

6.1.2 The traffic data collected during the peak hour of 2018 Chung Yeung Festival are used as basis to derive the "Reference scenario" (i.e. without the Proposed Development) for comparison against the "Design scenario" (i.e. with the Proposed Development) for the assessment year of 2028 in order to identify the extent of the traffic impact to be induced by the Proposed Development.

6.1.3 The assessment approach is summarised below:

Step 1: 2018 Peak Hour Observed Flows (Figure 2-4)

Step 2: 2028 Peak Hour Background Flows = 2018 Peak Hour Observed Flows x Growth Factors (refer to Section 5.2)

Step 3: 2028 Peak Hour Reference Flows = 2018 Peak Hour Background Flows + additional development flows by Planned Developments (refer to Section 5.3)

Step 4: 2028 Peak Hour Design Flows = 2028 Peak Hour Reference Flows + additional development flows by the Proposed Development (refer to Section 5.4)

Step 5: The potential impact to be induced by the Proposed Development can be assessed by comparing the Design Flows against the Reference Flows (refer to Section 5.5).

6.2 2028 Peak Hour Background Flows

6.2.1 The historical trend of traffic conditions in the Study Area was reviewed based on the Annual Average Daily Traffic (AADT) extracted from the Annual Traffic Census (ATC) Reports published by Transport Department. **Table 6-1** shows the AADT recorded at the relevant stations in the Study Area and the percent changes from 2012 to 2017. On average, there was an increase of 1.08% per annum in the area over the 5-year period.

Table 6-1 Historical Traffic Data from Annual Traffic Census

Stn. No.	Road Name	Between		Average Annual Daily Traffic (AADT)						Growth (p.a.)
				2012	2013	2014	2015	2016	2017	
5688	Ming Kum Rd	Tin King Rd	Hing Kwai St	8370	8440	8350	9330	9620	9470	2.5%
				--	0.84%	-1.07%	11.74%	3.11%	-1.56%	
5490	Ming Kum Rd	Tin King Rd	Tsun Wen Rd	7790	7860	8970	8990	9360	9210	3.41%
				--	0.90%	14.12%	0.22%	4.12%	-1.6%	
5899	Tsun Wen Rd	Ming Kum Rd	Leung Tak St	6650	6700	6630	6570	6360	5740	-2.90%
				--	0.75%	-1.04%	-0.90%	-3.2%	-9.75%	
5699	Tsun Wen Rd	Leung Wan St	Leung Tak St	7900	7970	7880	7410	7900	7770	-0.33%
				--	0.89%	-1.13%	-5.96%	6.61%	-1.65%	
5504	Tsun Wen Rd	Tsing Lun Rd	Leung Wan St	11750	11840	10510	10940	11390	11220	-0.92%
				--	0.77%	-11.23%	4.09%	4.11%	-1.49%	
5452	Tsing Lun Rd	Tsun Wen Rd	Tsing Chung Koon Rd	6640	6690	6530	5680	5920	5830	-2.57%
				--	0.75%	-2.39%	-13.02%	4.23%	-1.52%	
5451	Tsun Wen Rd	Tsing Chung Koon	Tsing Chung Koon Rd	12640	12750	12410	12800	13330	13120	0.75%
				--	0.87%	-2.67%	3.14%	4.14%	-1.58%	
5647	Tsing Lun Rd	Tsing Chung Koon Rd	Lam Tei INT Rd	9990	10070	9970	10390	11490	13310	5.91%
				--	0.80%	-0.99%	4.21%	10.59%	15.84%	
Total				71370	72320	71250	72110	75370	75670	1.08%
				--	0.82%	-1.48%	1.21%	4.52%	0.40%	

Source: Annual Traffic Census published by Transport Department.

6.2.2 Reference is also made to the 2014-based Territorial Population and Employment Data Matrices (TPEDM) planning data published by Planning Department. **Table 6-2** presents the population and employment data in Tuen Mun District for 2014, 2021 and 2026. As indicated in the table, the population and employment places in Tuen Mun District are anticipated to increase by +0.80% and +1.15% p.a. respectively over the period of 2018 - 2026.

Table 6-2 2014-Based TPEDM for Tuen Mun District

Category	2014	2018(1)	2021	2026	2018-2026 Average Growth (% p.a.)
Population	470,150	492,093	508,550	524,500	0.80%
Employment Places	121,650	126,479	130,100	138,550	1.15%
Total	591,800	618,571	638,650	663,050	0.87%

Source: 2014, 2021 & 2026 population and employment places are extracted from 2014-based TPEDM published by Planning Department.

Notes: (1) 2018 population and employment places are calculated by interpolation between 2014 – 2021

6.2.3 In view of the above, to provide conservative estimates, an average traffic growth rate of +1.15% is assumed and applied to the 2018 Peak Hour Observed Flows on the road links in the Study Area to derive the 2028 Peak Hour Background Flows.

6.2.4 Hence, by applying the proposed annual growth factors to the 2018 Peak Hour Observed Flows, the 2028 Peak Hour Background Flows are derived.

6.3 2028 Peak Hour Reference Flows

6.3.1 According to the published information from Town Planning Board, there are several planned housing developments Tuen Mun under the Hong Kong Housing Authority. The locations of the planned housing developments are shown in **Figure 6-1**.

6.3.2 The additional peak hour traffic to be generated by the new housing developments are calculated based on peak hour trip rates from Transport Planning and Design Manual. To provide conservative estimates, the weekday AM peak hour trip rates which are generally higher than the trip rates on public holidays are adopted and the results are indicated in **Table 6-3**.

Table 6-3 Estimated Peak Hour Trip Generations by Planned Developments

Location	Land Use	Trip Rates		Trip Generations (pcu/hr)	
		In	Out	In	Out
Government Land at junction of Tsun Wen Road and Leung Tak Street, Tuen Mun [A/TM/448]	Private Housing (333 flats) (pcu/hr/unit)(1)	0.0425	0.0718	22	32
	Retail/Shopping (3,109 sqm) (pcu/hr/100sqm)(2)	0.2434	0.2296		
Government Land at Leung Tak Street, Tuen Mun [A/TM/448]	Private Housing (261 flats) (pcu/hr/unit)(1)	0.0425	0.0718	17	25
	Retail/Shopping (2,440 sqm) (pcu/hr/100sqm)(2)	0.2434	0.2296		
Site 3 and 4 (East), Tuen Mun Area 54, New Territories [A/TM/499](3)	PRH (4,300 flats) (pcu/hr/unit)	0.0326	0.0432	141	186
	Retail (3,130 sqm) (pcu/hr/100sqm)	0.2434	0.2296	9	9
Site 1 and 1A, Tuen Mun Area 54, New Territories [A/TM/500](3)	PRH (4,300 flats) (pcu/hr/unit)	0.0326	0.0432	114	151
	Retail (2,420 sqm) (pcu/hr/100sqm)	0.2434	0.2296	6	5
			Total	**309**	**408**

Notes: (1) AM Peak Hour trip rates extracted from TPDM Volume 1, Chapter 3, Annex D, Table 1.
(2) AM Peak Hour trip rates extracted from TPDM Volume 1, Chapter 3, Annex D, Table 2.
(3) Trip generations and attraction extracted from TIA reports of respective planning applications.

6.3.3 The additional development trips by the planned developments are then added to the 2028 Peak Hour Background Flows to derive the 2028 Peak Hour Reference Flows (i.e. without the proposed development) and the results are shown in **Figure 6-2**.

6.4 2028 Peak Hour Design Flows

6.4.1 Shuttle bus traffic are assigned according to the proposed bus routeing to and from West Rail Siu Hong Station as indicated in **Figure 4-1, Figure 6-3** shows the assignment of development traffic on the road network in the Study Area during the peak hour of grave sweeping festivals.

6.4.2 By adding the peak hour development flows (**Figure 6-3**) to the forecast 2028 Peak Hour Reference Flows (**Figure 6-2**), the 2028 Peak Hour Design Flows (i.e. with Proposed Development) are derived and shown in **Figure 6-4.**

6.4.3 Based on the 2028 Peak Hour Reference and Design flows, the performance of the key junctions in the vicinity of the Study Area are assessed. The results are summarized in **Table 6-4** and detailed calculation sheets are given in **Appendix C**.

Table 6-4 2028 Peak Hour Performance of Key Junctions

Ref No.	Junction Location	Junction Type	Capacity Index (1)	2028 Reference	2028 Design
J1	Hing Fu Street	Roundabout	DFC(1)	0.03	0.09
J2	Hing Kwai Street / Tong Hang Street / Hing Fu Street	Priority	DFC	0.13	0.22
J3	Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	Signal	R.C. (2)	100%+	100%
J4	Tsun Wen Road / San Fuk Road	Priority	DFC	0.04	0.04
J5	Tsun Wen Road / Leung Wan Street	Signal	R.C.	26.3%	26.3%
J6	Tsing Lun Road / Tsun Wen Road	Signal	R.C.	95.9%	95.9%
J7	Tsing Lun Road / Tsing Chung Koon Road	Signal	R.C.	87.4%	87.4%
J8	Tin King Road / Ming Kum Road	Signal	R.C.	100%+	100%+
J9	Tsing Tin Road / Ming Kum Road	Signal	R.C.	100%+	100%+
J10	Tsing Lun Road / Access to Tuen Mun Hospital	Priority	DFC	0.38	0.38
J11	Lam Tei Interchange	Roundabout	DFC	0.61	0.61
J12	Tsing Lun Road / Hong Po Road	Roundabout	DFC	0.49	0.49

Notes: (1) DFC = Design Flow to Capacity ratio.
(2) R.C. = Reserve Capacity under Current cycle time

6.4.4 As shown in **Table 6-4**, all the key junctions in the Study Area would perform satisfactorily for both the Reference Scenario (i.e. without proposed development) and Design Scenario (i.e. with proposed development).

6.5 Proposed Access Road Improvement

6.5.1 In order to improve the condition of the access road leading to the Application Site, it is proposed to widen the road to provide a 1.5m wide footpath and two passing bays along the road as shown in **Figure 6-5**.

7 Summary and Conclusion

7.1 Summary of Findings

7.1.1 The Applicant applies for planning approval for a religious institution and columbarium in Tin Kwong Lun Yee (The Proposed Development) at Lots Nos. 1744 S.A. – S.C. and 1744 S.F. – S.I. in D.D. 132 in Tuen Mun. The columbarium within the Proposed Development will provide a total of 11,904 niches. Ozzo Technology (HK) Limited are commissioned to undertake a Traffic Impact Assessment (TIA) Study to assess the potential traffic impact to be induced by the Proposed Development.

7.1.2 The assessment year is set as 2028, i.e. 3 years from the full occupation of the niches by 2025.

7.1.3 In order to minimise the amount of vehicular traffic in the area and to encourage use of public transport, the Applicant proposes to provide free shuttle bus services for visitors between the Proposed Development and West Rail Siu Hong Station (North).

7.1.4 It is estimated that around 88 pcu's (44 in and 44 out) are to be induced by the Proposed Development during the peak hour of Ching Ming Festival by making reference to the trip rates observed at the existing columbarium during Ching Ming Festival in 2018.

7.1.5 The 2028 Peak Hour Reference Traffic Flows (i.e. without the proposed columbarium) are estimated taking into account the planned and committed developments, as well as the future population and employment in Tuen Mun.

7.1.6 The additional traffic to be induced by the Proposed Development is added to the 2028 Reference Flows to obtain the 2028 Design Flows (i.e. with the proposed columbarium).

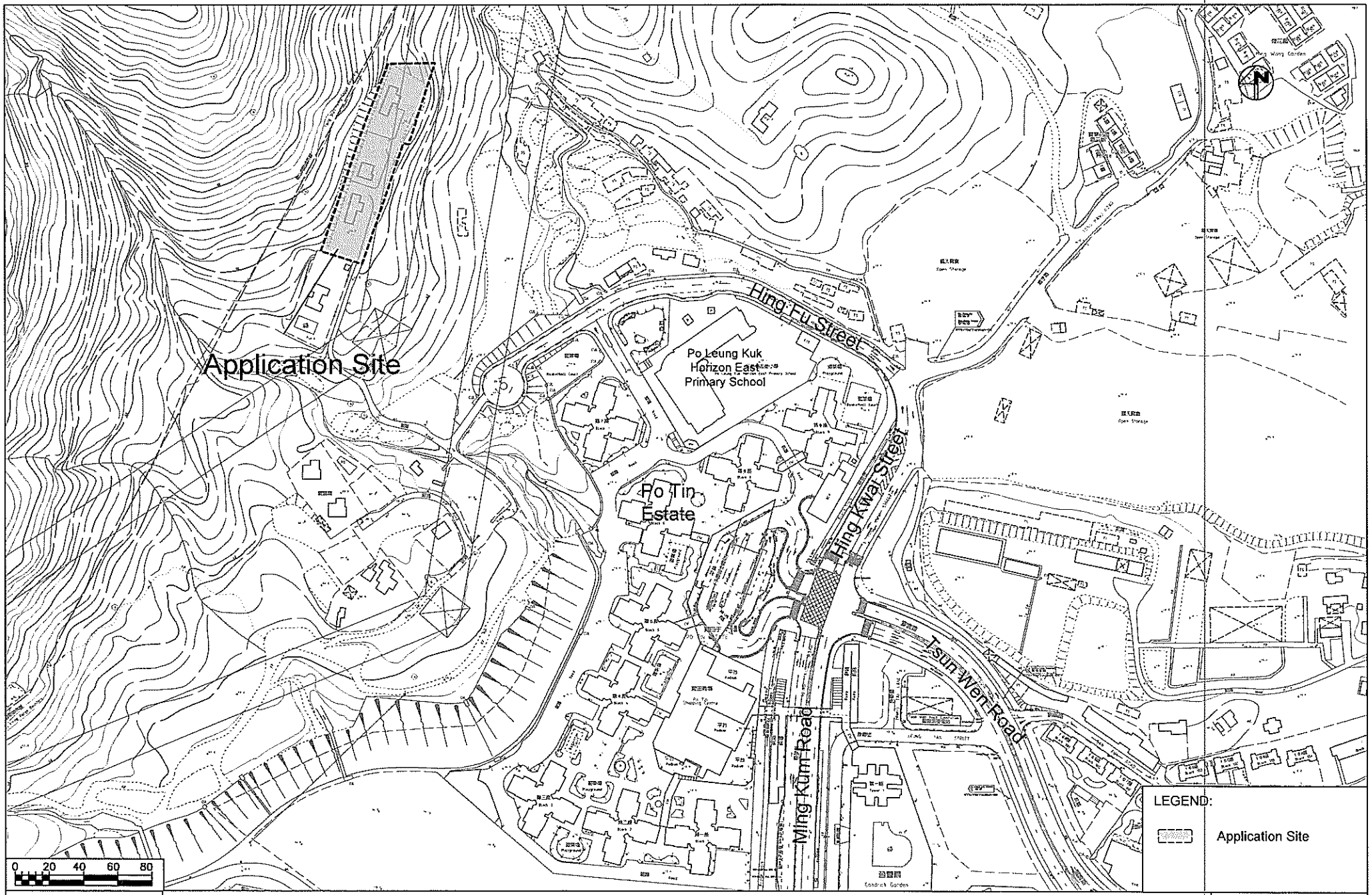
7.1.7 Junction capacity assessments are carried out for all the key junctions within the Study Area. The results indicated that the key junctions and links in the area would perform satisfactorily in the design year of 2028 even with the proposed columbarium. The traffic impact to be induced by the proposed columbarium would be acceptable without creating adverse impact on the nearby road network.

7.1.8 To improve the condition of the access road leading to the Application Site, the Applicant proposes to widen the access road to provide a 1.5m wide footpath and two passing bays along the road.

7.2 Conclusion

7.2.1 The results of the assessment indicate that, with the provision of free shuttle bus services to be provided by the Applicant, the amount of traffic to be induced by the Proposed Development would be small and hence the potential traffic impact to be induced by the proposed columbarium would not pose adverse traffic impacts to the road network in the vicinity of the Application Site.

Figures



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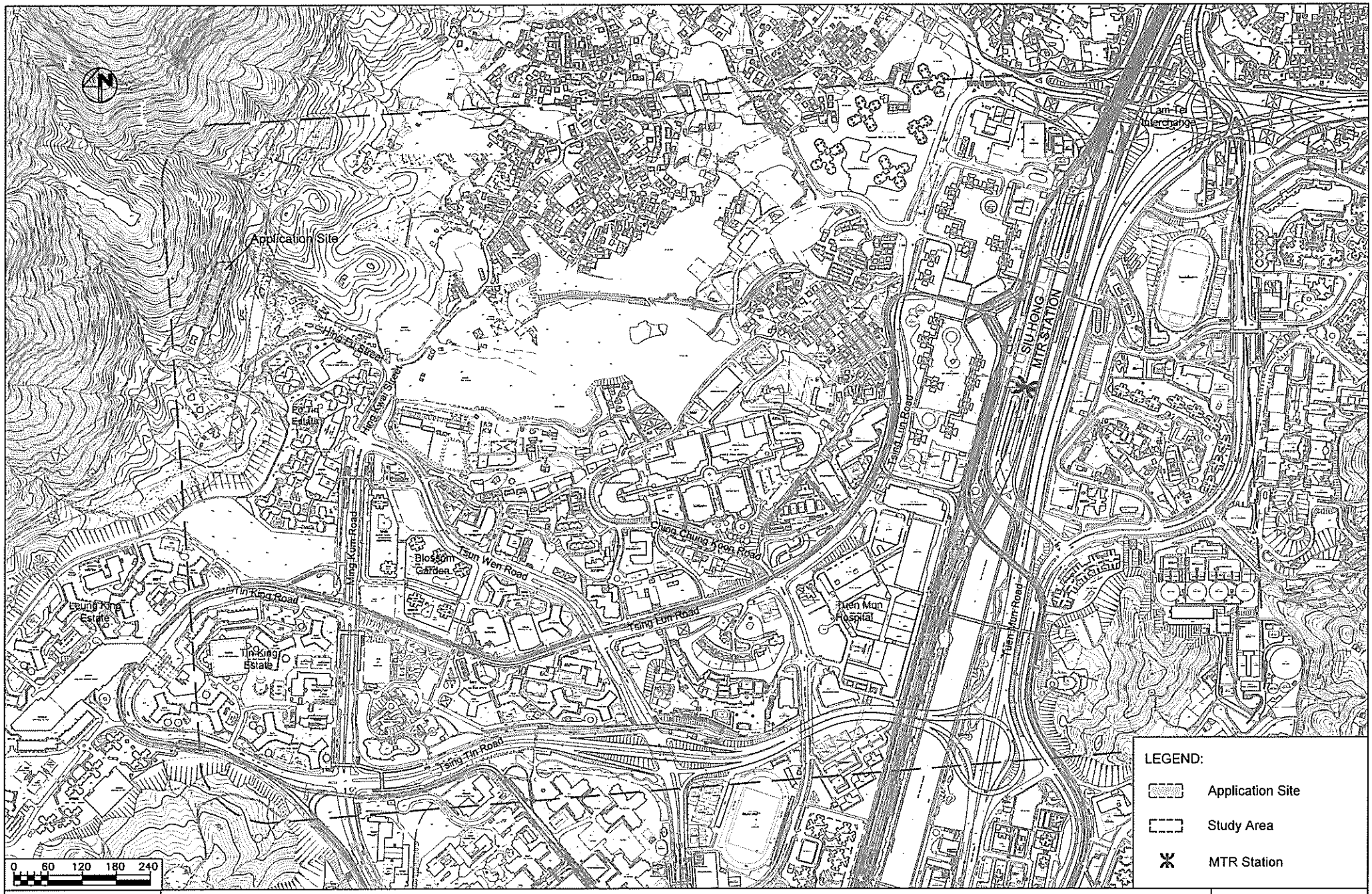
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Site Location

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Dwg No. Figure 2-1



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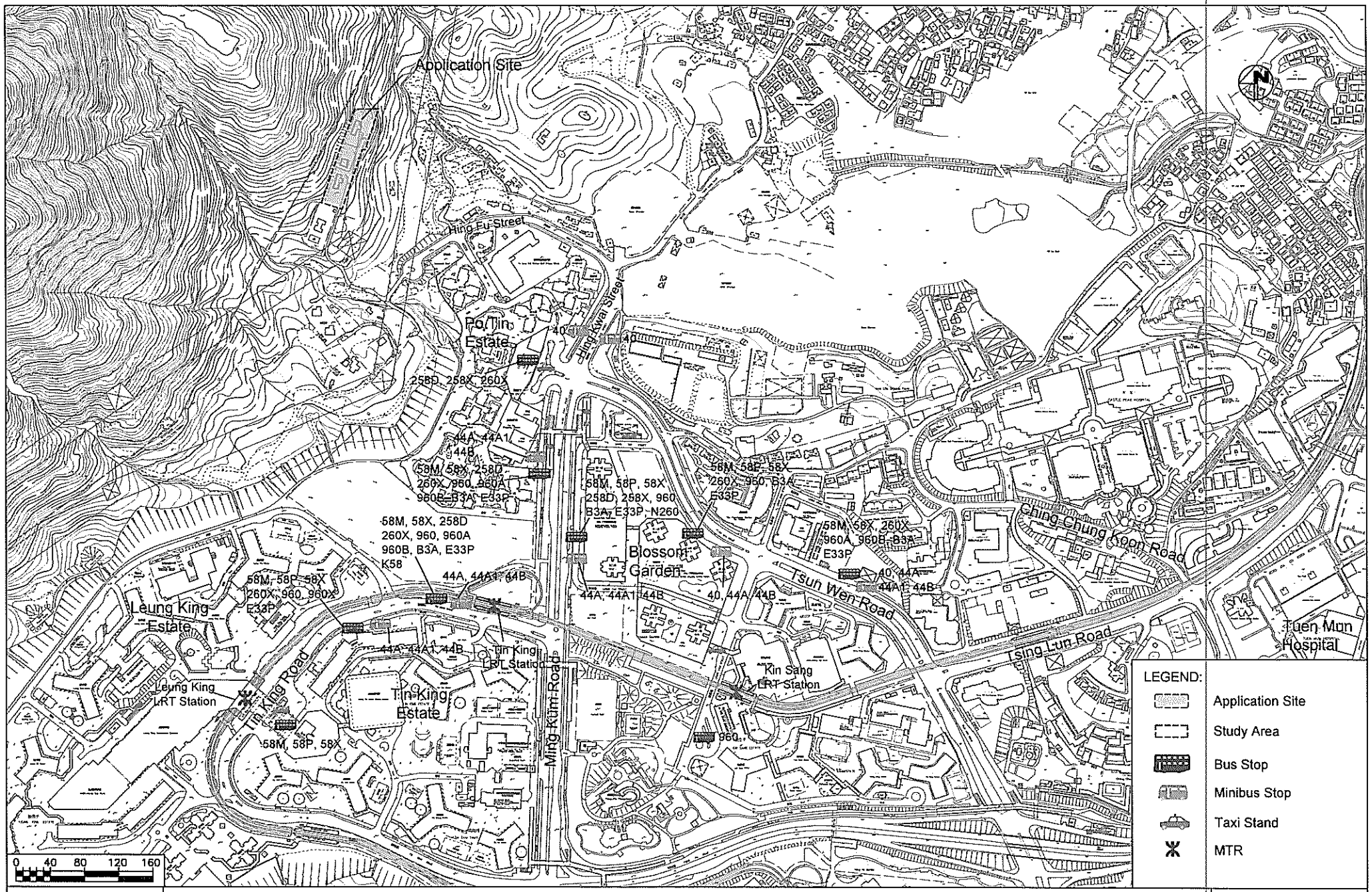
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Study Area

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Project No. 81460 | Rev. A

Dwg No. Figure 2-2



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Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Existing Public Transport Inventory

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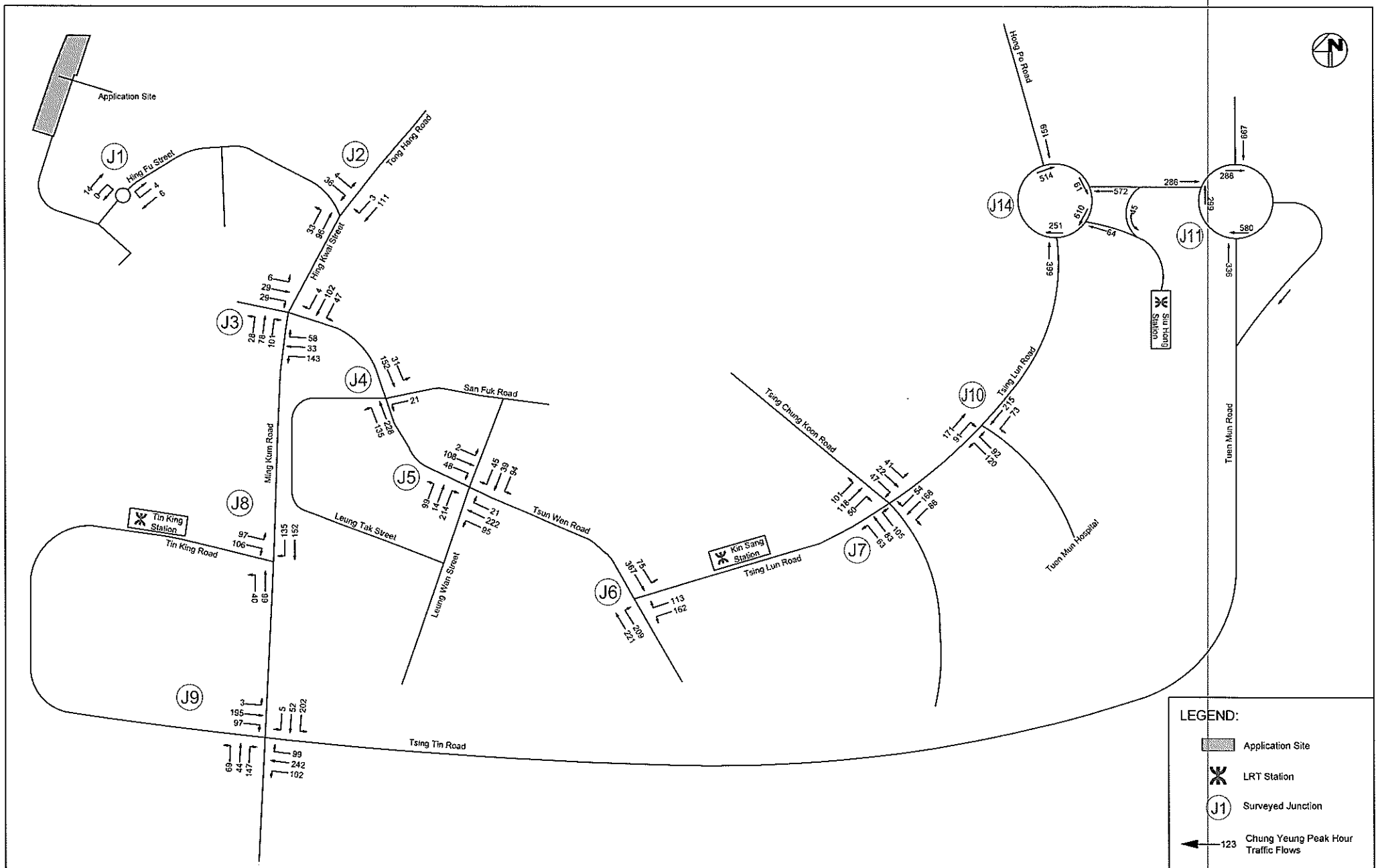
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Location of Surveyed Key Junctions

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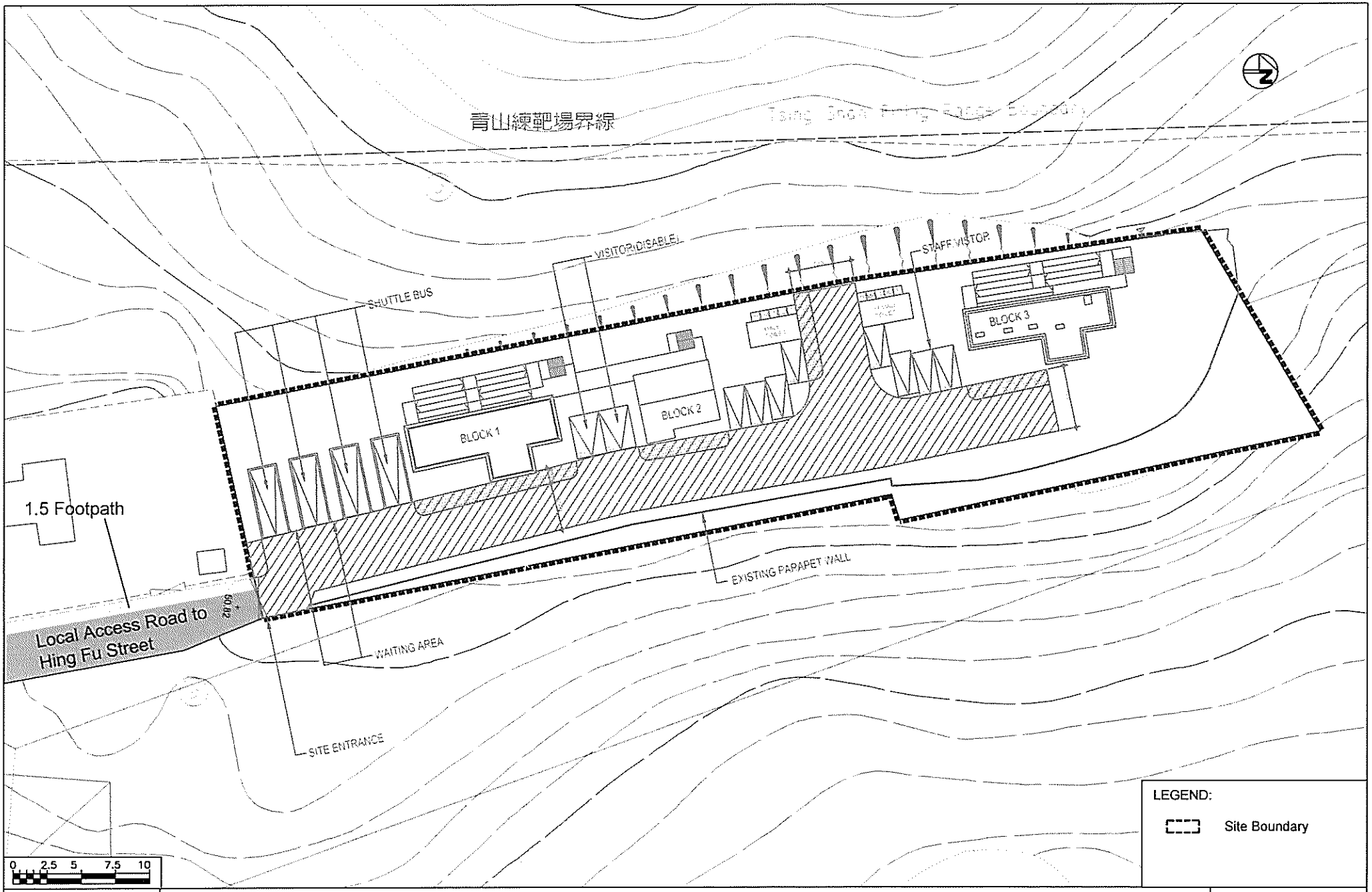
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Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

2018 Chung Yeung Observed Peak Hour Traffic Flows

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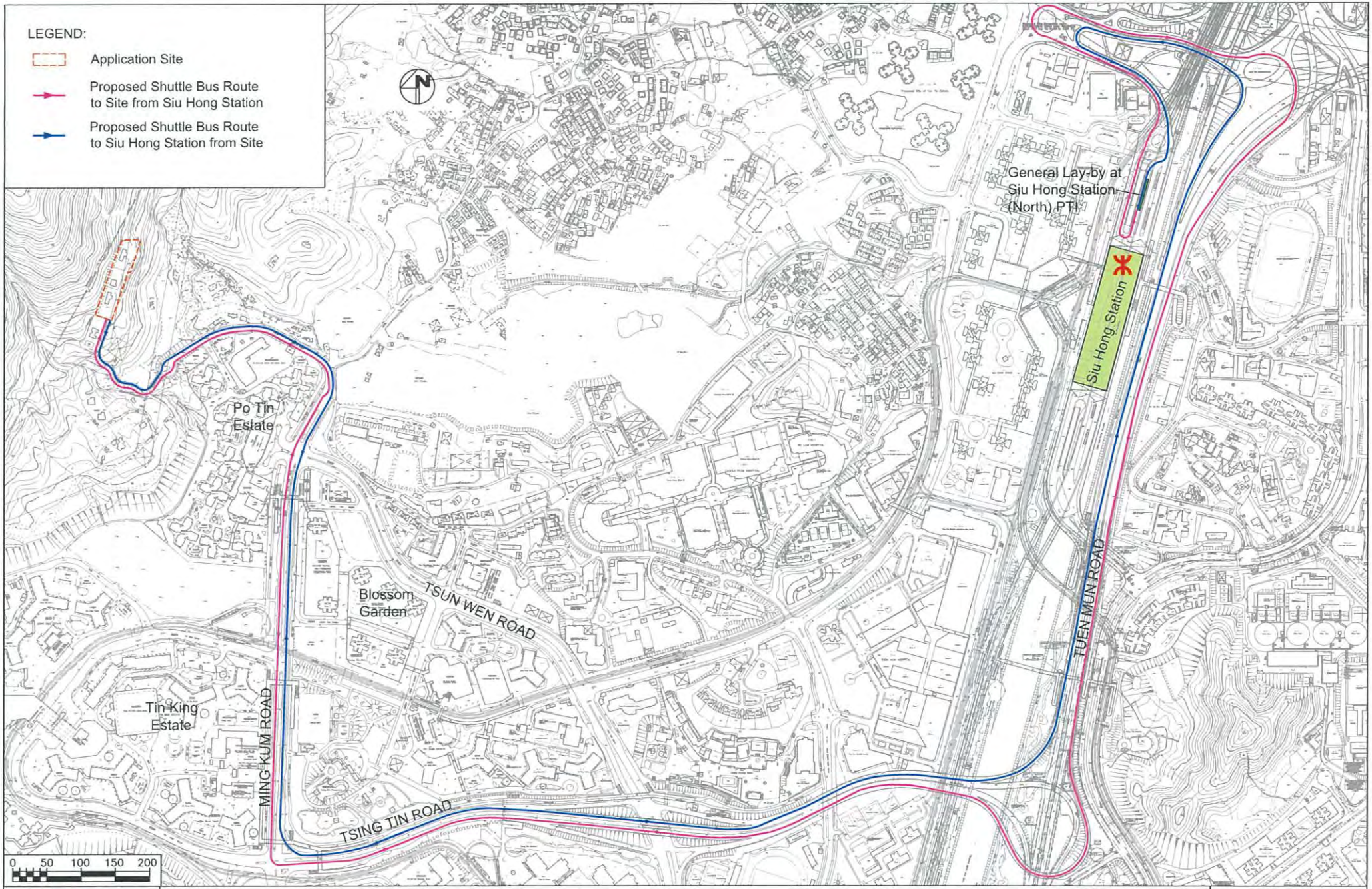
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Layout of Application Site

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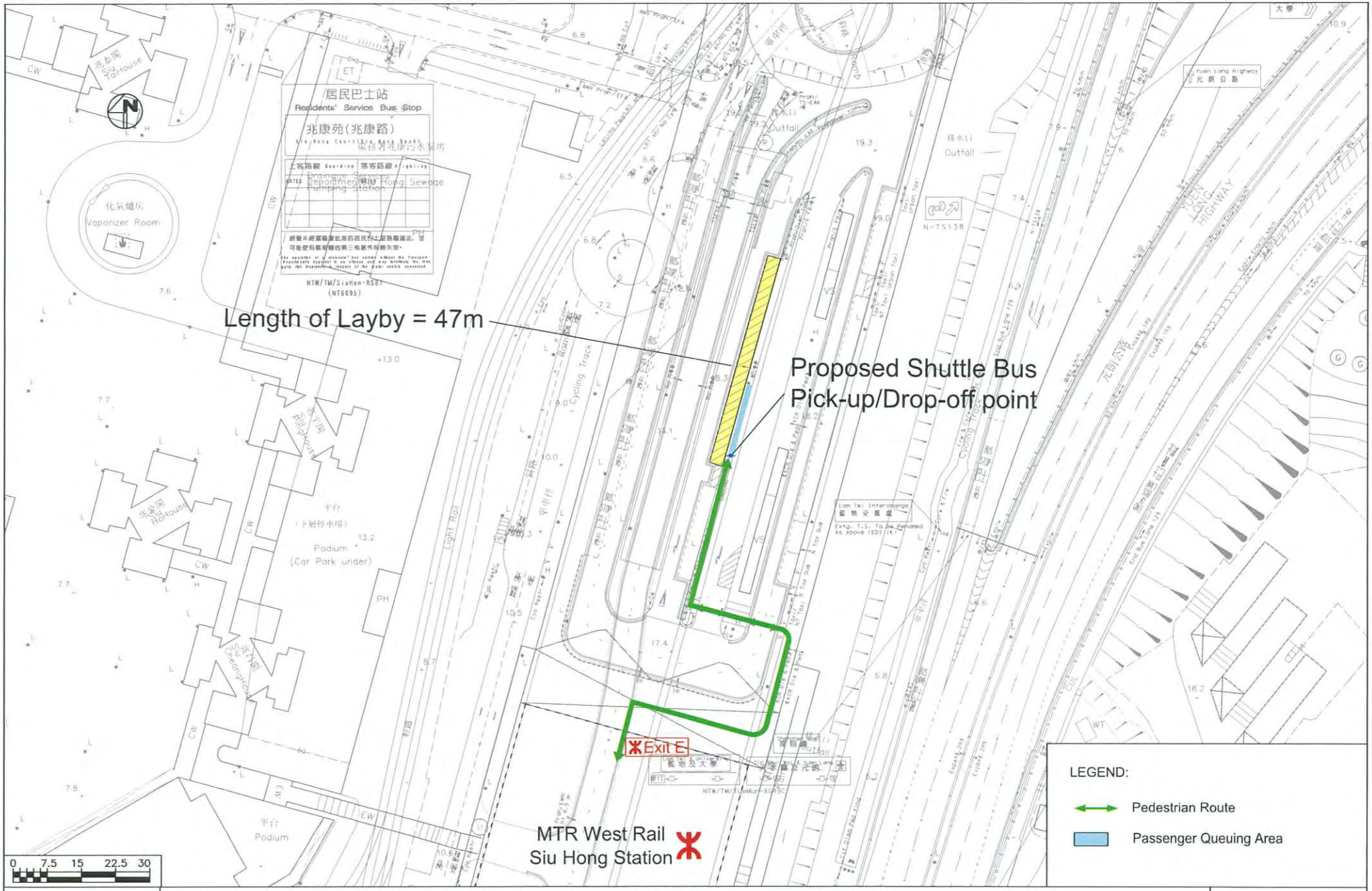
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Proposed Routing of Shuttle Bus Services

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Dwg No. Figure 4-1



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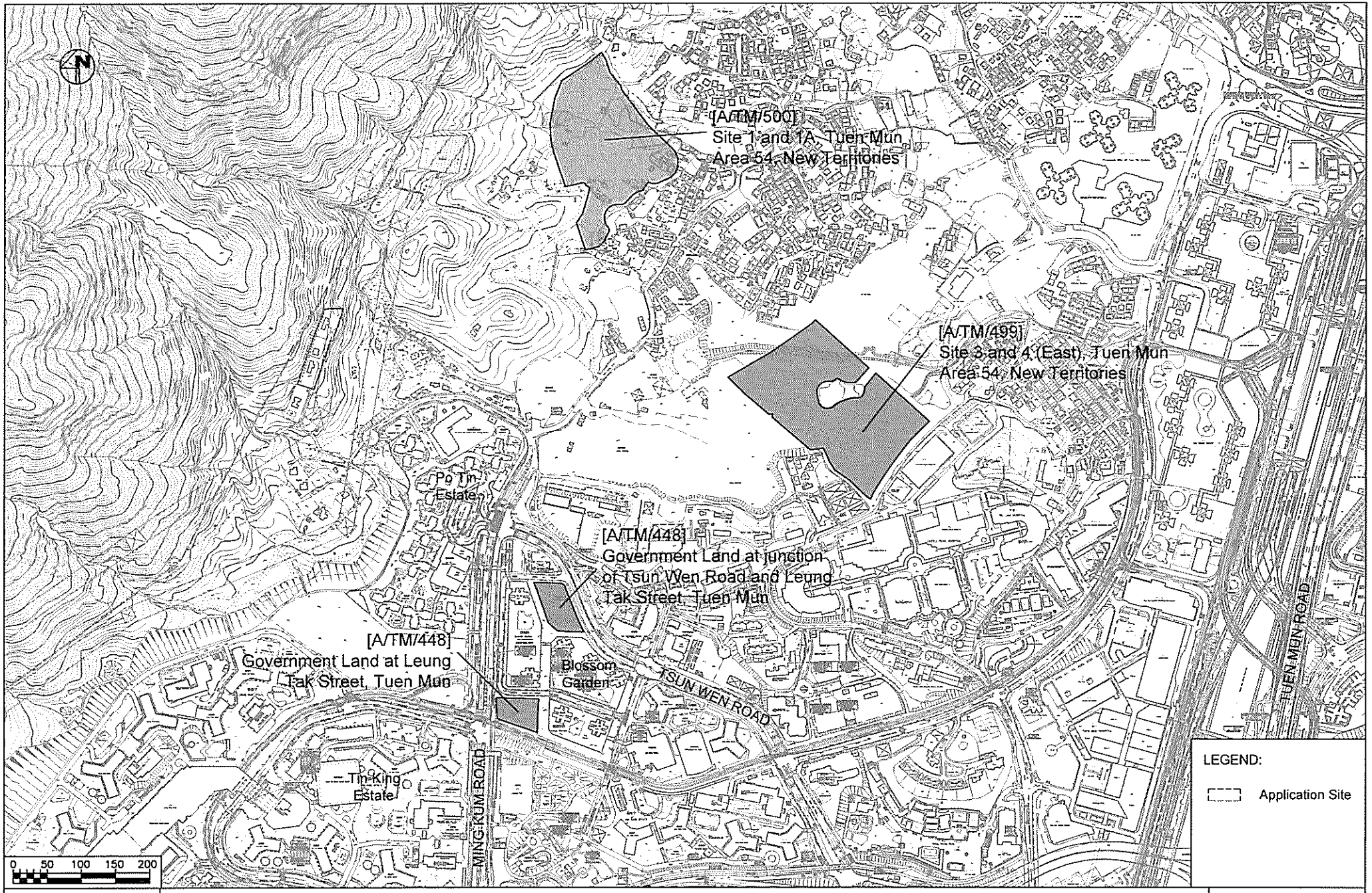
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Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Proposed Pick-up/Drop-off Point at General lay-by at MTR West Rail Siu Hong Station (North)

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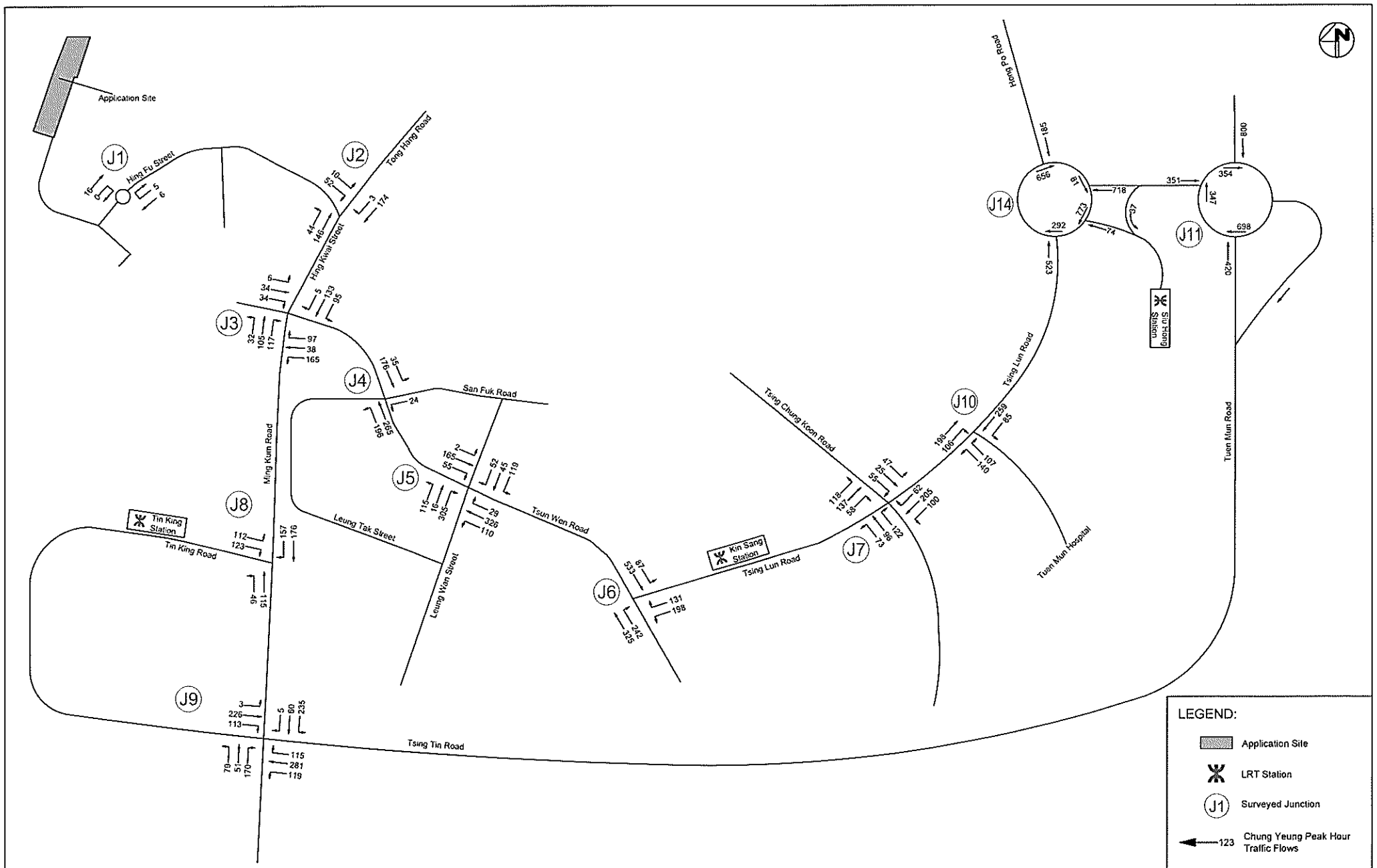
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Locations of Planned Developments

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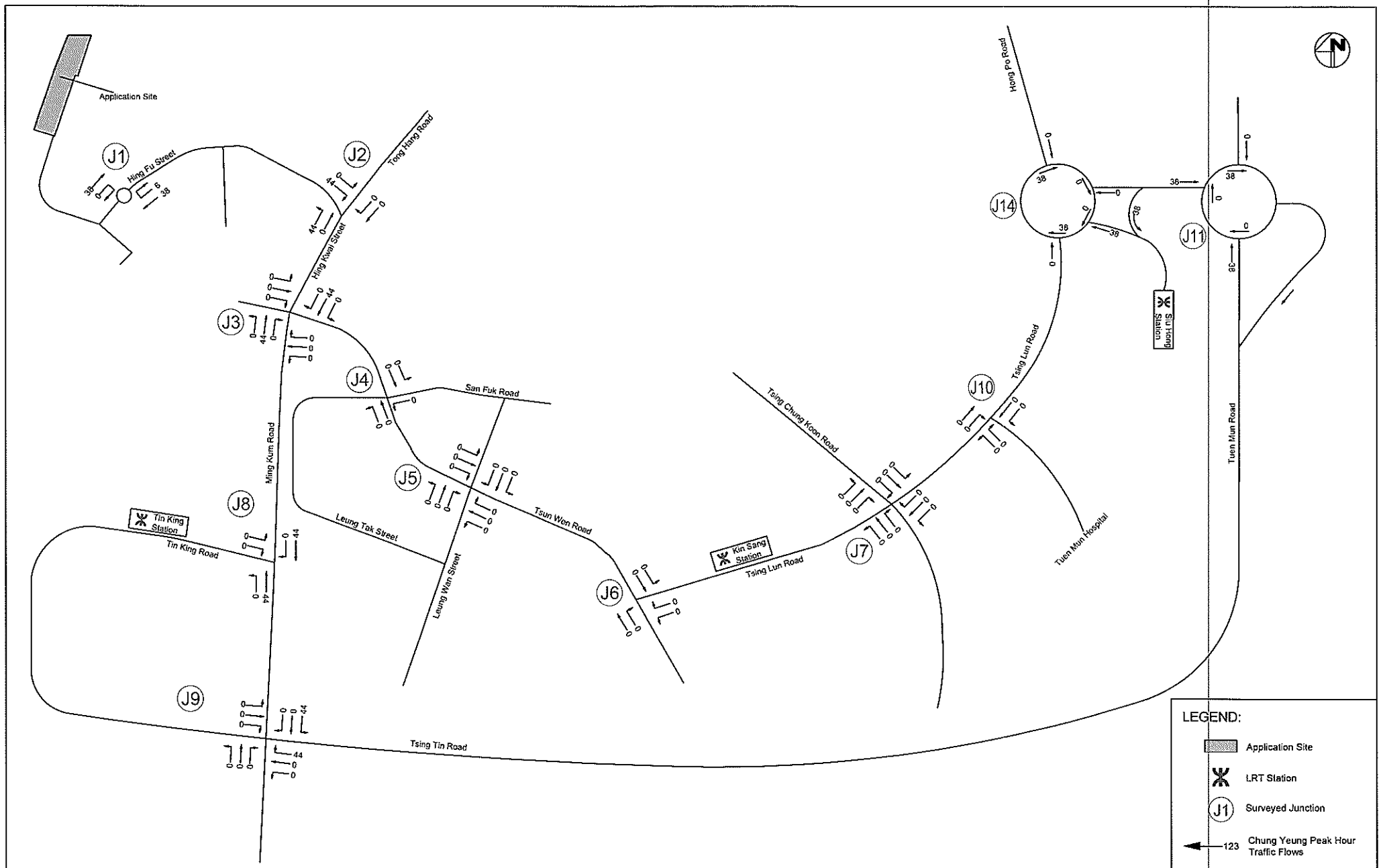
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

2028 Chung Yeung Reference Peak Hour Traffic Flows

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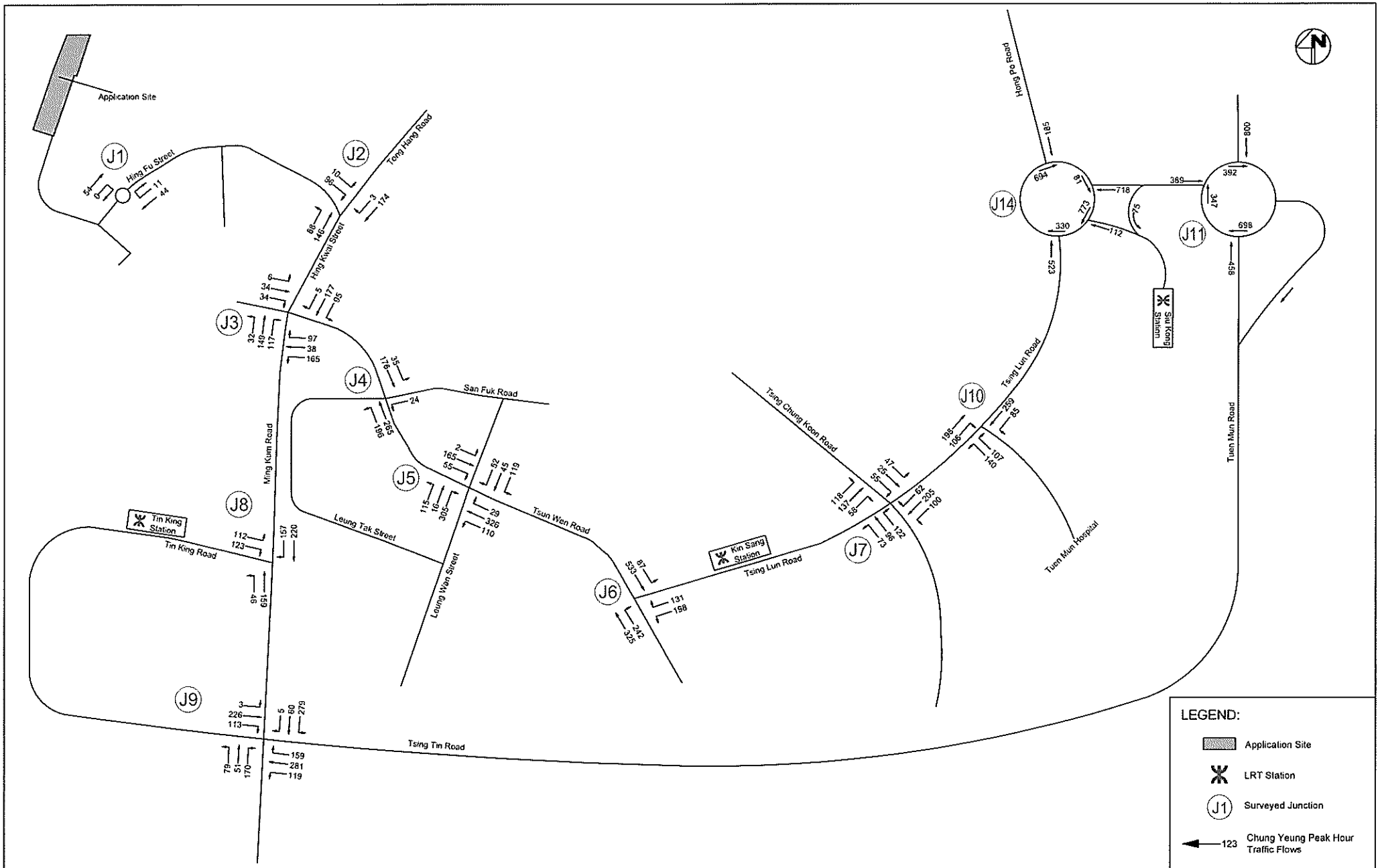
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Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Forecast Peak Hour Development Traffic Flows

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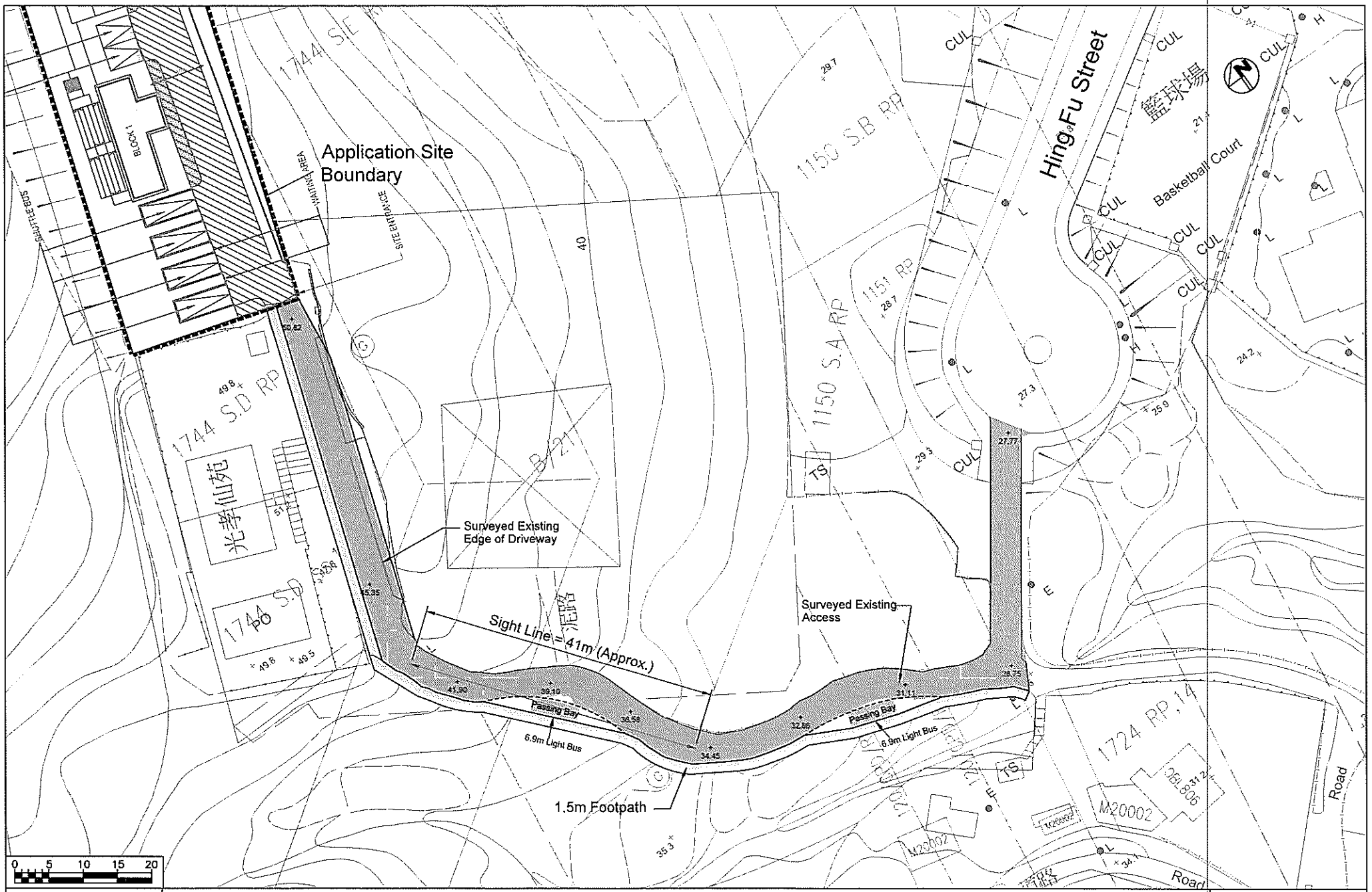
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

2028 Chung Yeung Design Peak Hour Traffic Flows

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Dwg No. Figure 6-4



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Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Proposed Widen of Local Access Road and New Lay-By

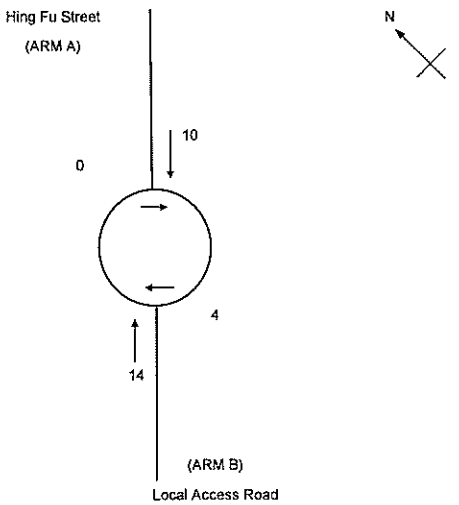
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Appendix A

2018 Junction Calculation Sheets

OZZO TECHNOLOGY (HK) LIMITE	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun Nev		PROJECT NO.: 81460	PREPARED BY:	TZ	May-19
J1 : Hing Fu Street Roundabout	2018 CY	FILENAME :	CHECKED BY:	MM	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	May-19

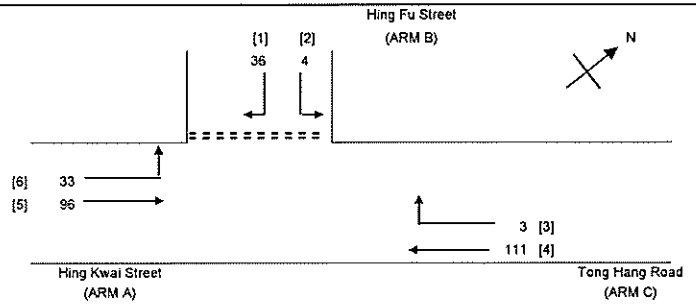


ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.3	2.2
E	=	Entry width (m)	3.4	3.4
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	30.0	54.0
Q	=	Entry flow (pcu/h)	10	14
Qc	=	Circulating flow across entry (pcu/h	0	4
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	0.11	2.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.95	0.80
X2	=	V + ((E-V)/(1+2S))	3.36	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	1017	727
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.53	0.46
Qe	=	K(F-Fc*Qc)	967	582
DFC	=	Design flow/Capacity = Q/Qe	0.01	0.02

Total In Sum = 23 PCU

DFC of Critical Approach = 0.02

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	KL	May-19
J2 : Hing Kwai Street / Tong Hang Street / Hing Fu Street	2018 CY	FILENAME :	CHECKED BY:	TZ	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J2_Hing Fu Street_Hing Kwai Street_P.xls	REVIEWED BY:	MM	May-19



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.00	(metres)
W cr	=	0.3	(metres)
q a-b	=	33	(pcu/hr)
q a-c	=	96	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	7.00	(metres)
Vr c-b	=	35	(metres)
q c-a	=	111	(pcu/hr)
q c-b	=	3	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	40	(metres)
Vr b-a	=	35	(metres)
Vr b-c	=	35	(metres)
q b-a	=	36	(pcu/hr)
q b-c	=	4	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8503871
E	=	0.9104787
F	=	1.2143102
Y	=	0.7585
F for (Qb-ac)	=	0.0993789

THE CAPACITY OF MOVEMENT :

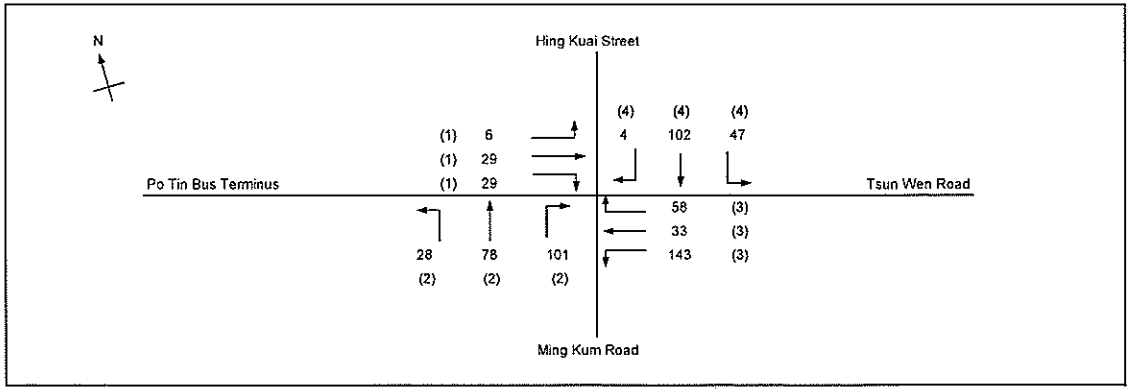
Q b-a	=	494			
Q b-c	=	651	Q b-c (O) =	639.1	
Q c-b	=	861			
Q b-ac	=	506.1			
TOTAL FLOW	=	283.25	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

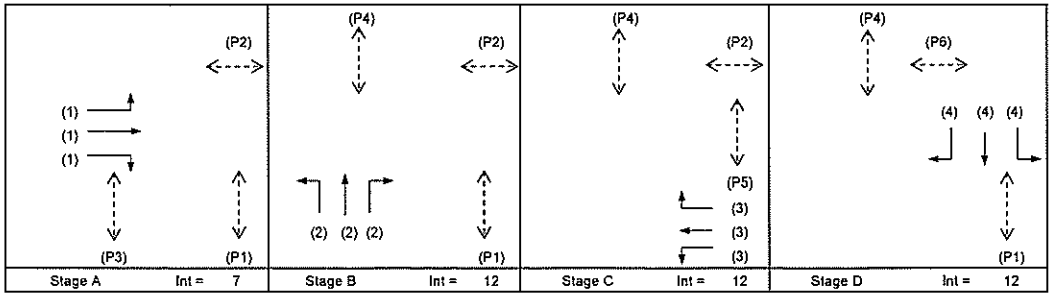
DFC b-a	=	0.0734
DFC b-c	=	0.0061
DFC c-b	=	0.0035
DFC b-ac	=	0.0795

CRITICAL DFC = 0.08

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO. 81460	Prepared By:	KL	May-19
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	2018 CY	FILENAME :	Checked By:	TZ	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	MM	May-19



		Existing Cycle Time	
No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.164	
Loss time	L =	39	sec
Total Flow	=	655	pcu
Co	= (1.5*L+5)/(1-Y)	76.0	sec
Cm	= L/(1-Y)	46.7	sec
Yult	=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	269.6	%
Cp	= 0.9*L/(0.9-Y)	47.7	sec
Ymax	= 1-L/C	0.567	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	210.3	%

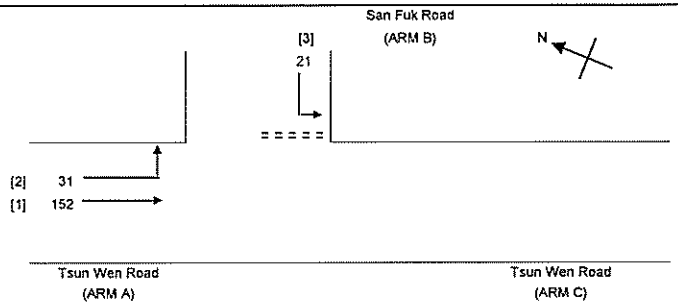


	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		48	8
P2	A,B,C	7.2	5	6		52	6
P3	A	10.0	5	8		6	8
P4	B,C,D	12.3	5	10		56	10
P5	C	8.5	5	7		17	7
P6	D	8.6	5	7		15	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	6			6	1.00	1870			1870	0.00			1	15	0.013	0	23
RT,SA	A	4.60	1	1	24		N	2075		29	29	58	0.50	2012			2012	0.03	0.03		9	15	0.174	6	30
LT,SA	B	3.40	2	1	11			2095	28	22		50	0.56	1946			1946	0.03			8	13	0.178	6	32
SA	B	3.50	2	1				2105		56		56	0.00	2105			2105	0.03			8	13	0.135	6	32
RT	B	3.50	2	1	26			2105			101	101	1.00	1990			1990	0.05	0.05		16	13	0.450	12	34
LT	C	3.30	3	1	17		N	1945	83			83	1.00	1787			1787	0.05			14	9	0.492	6	42
SA,LT	C	3.40	3	1	20			2095	60	33		93	0.65	1998			1998	0.05	0.05		14	9	0.463	12	41
RT	C	3.40	3	1	25			2095			58	58	1.00	1976			1976	0.03			9	9	0.293	6	37
LT,SA	D	3.70	4	1	16		N	1985	47	24		71	0.66	1869			1869	0.04			12	11	0.310	6	35
RT,SA	D	3.70	4	1	20			2125		78	4	82	0.05	2117			2117	0.04	0.04		12	11	0.317	6	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	KL	May-19
J4 : Tsun Wen Road / San Fuk Road	**2018 CY**	FILENAME :	CHECKED BY:	TZ	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	MM	May-19



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.60	(metres)
W cr	=	0	(metres)
q a-b	=	31	(pcu/hr)
q a-c	=	152	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.50	(metres)
Vl b-a	=	25	(metres)
Vr b-a	=	25	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	21	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5556799
E	=	0.9632708
F	=	0.5859548
Y	=	0.7378

THE CAPACITY OF MOVEMENT :

Q b-a	=	324			
Q b-c	=	675	Q b-c (O) =	675	
Q c-b	=	408			

TOTAL FLOW = 202.5 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

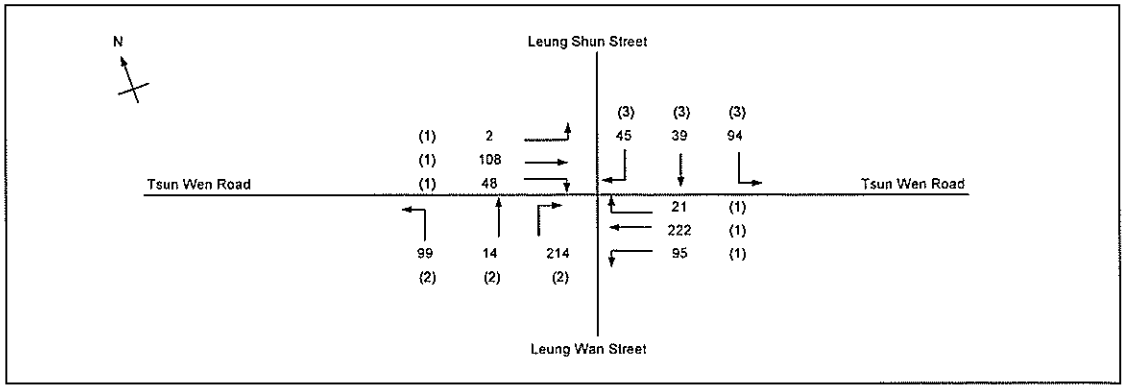
DFC b-a	=	0.0000
DFC b-c	=	0.0304
DFC c-b	=	0.0000

CRITICAL DFC = 0.03

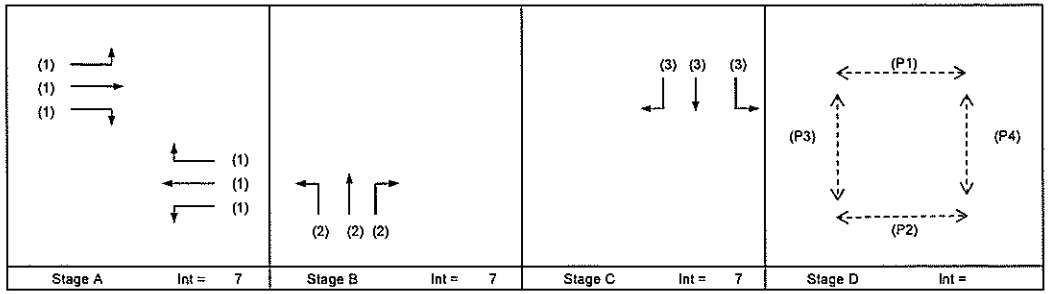
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	PROJECT NO. 61460	Prepared By:	KL	May-19
J5: Tsun Wen Road / Leung Wan Street	FILENAME :	Checked By:	TZ	May-19
2018 Chung Yeung Observed Hour Traffic Flows	**2018 CY** J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	MM	May-19



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.335	
Loss time		L =	46	sec
Total Flow		=	998	pcu
Co	= (1.5*L+5)/(1-Y)	=	111.3	sec
Cm	= L/(1-Y)	=	69.2	sec
Yult		=	0.555	
R.C.ult	= (Yult-Y)/Y*100%	=	65.6	%
Cp	= 0.9*L/(0.9-Y)	=	73.3	sec
Ymax	= 1-L/C	=	0.617	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	65.6	%

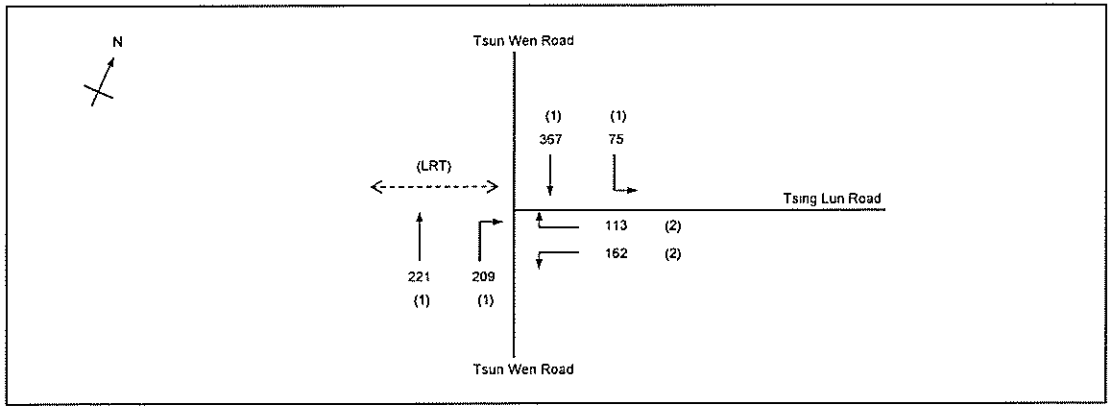


Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		22	6
P2	D	18.0	5	15		13	15
P3	D	19.5	5	16		12	16
P4	D	21.4	5	18		10	18

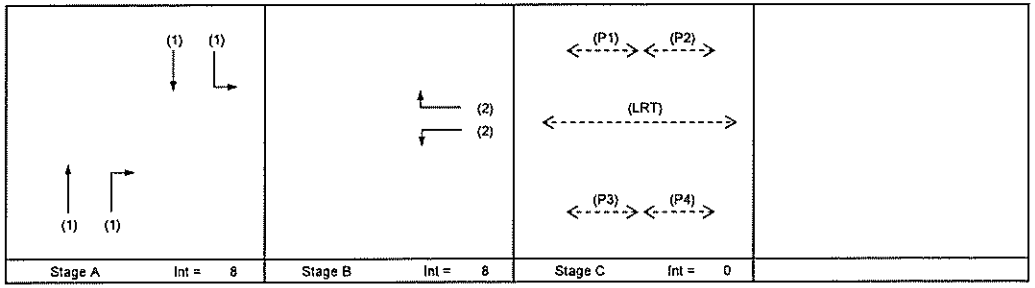
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	2	51		53	0.04	1934			1934	0.027			6	21	0.155	6	39
SA	A	3.30	1	1				2085		57		57	0.00	2085			2085	0.027			6	21	0.156	6	39
RT	A	3.30	1	1	30	O		2085			48	48	1.00	1767	12	60	1827	0.026			6	21	0.149	6	39
LT,SA	A	3.30	1	1	10		N	1945	95	50		145	0.65	1771			1771	0.082			18	21	0.468	18	45
SA	A	3.40	1	1				2095		172		172	0.00	2095			2095	0.082	0.082		18	21	0.458	24	44
RT	A	3.40	1	1	30	O		2095			21	21	1.00	1776	12	60	1836	0.011			2	21	0.054	0	33
LT,SA,RT	B	5.50	2	1	25		N	2165	99	14	214	327	0.96	2047			2047	0.160	0.160		35	33	0.530	42	38
LT,SA,RT	C	3.60	3	1	25		N	1975	94	39	45	177	0.78	1886			1886	0.094	0.094		21	20	0.552	24	48
PED	D																			28		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO. 81450	Prepared By:	KL	May-19
J6: Tsing Lun Road / Tsun Wen Road	2018 CY	FILENAME :	Checked By:	TZ	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	MM	May-19



			Existing Cycle Time
No. of stages per cycle		N =	3
Cycle time		C =	72 sec
Sum(y)		Y =	0.210
Loss time		L =	36 sec
Total Flow		=	1145 pcu
Co	= (1.5*L+5)/(1-Y)	=	74.7 sec
Cm	= L/(1-Y)	=	45.6 sec
Yult		=	0.630
R.C.ult	= (Yult-Y)/Y*100%	=	200.2 %
Cp	= 0.9*L/(0.9-Y)	=	46.9 sec
Ymax	= 1-L/C	=	0.500
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	114.4 %

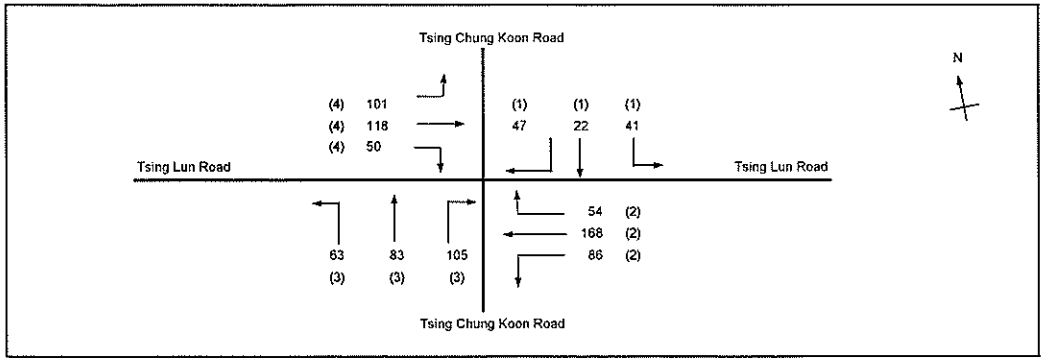


Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

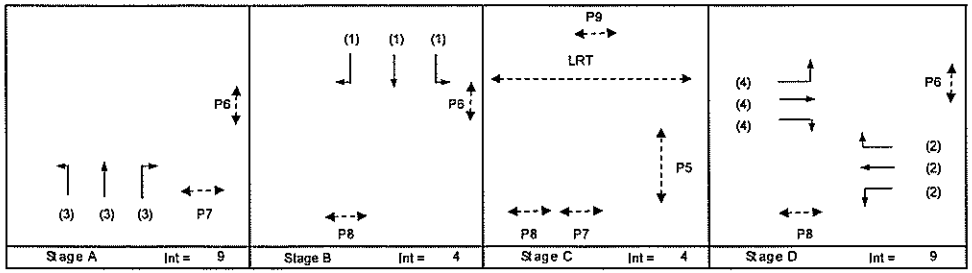
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		221		221	0.00	4030			4030	0.055			9	21	0.183	9	18
RT	A	3.50	1	1	10	O		2105			209	209	1.00	1630	12	100	1730	0.120	0.120		21	21	0.413	12	21
LT	A	3.30	1	1	10		N	1945	75			75	1.00	1691			1691	0.044			8	21	0.162	6	18
SA	A	3.30	1	2	10			4170		367		367	0.00	4170			4170	0.088			15	21	0.302	15	18
LT	B	3.30	2	1	10			2085	162			162	1.00	1813			1813	0.089	0.089		15	15	0.428	12	26
RT	B	3.50	2	1	10			2105			113	113	1.00	1830			1830	0.061			11	15	0.255	6	23
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New	2018 CY	PROJECT NO.: 81460	Prepared By:	TZ	May-19
J7: Tsing Lun Road / Tsing Chung Koon Road		FILENAME :	Checked By:	MM	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J7_Tsing Lun Rd_Tsing Chung Koon Rd_S.x	Reviewed By:	OC	May-19



			Existing Cycle Time
No. of stages per cycle	N =		4
Cycle time	C =		101 sec
Sum(y)	Y =		0.250
Loss time	L =		39 sec
Total Flow	=		937 pcu
Co	= (1.5*L+5)/(1-Y)	=	84.6 sec
Cm	= L/(1-Y)	=	52.0 sec
Yult		=	0.608
R.C.ult	= (Yult-Y)/Y*100%	=	143.4 %
Cp	= 0.9*L/(0.9-Y)	=	54.0 sec
Ymax	= 1-L/C	=	0.614
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	121.3 %

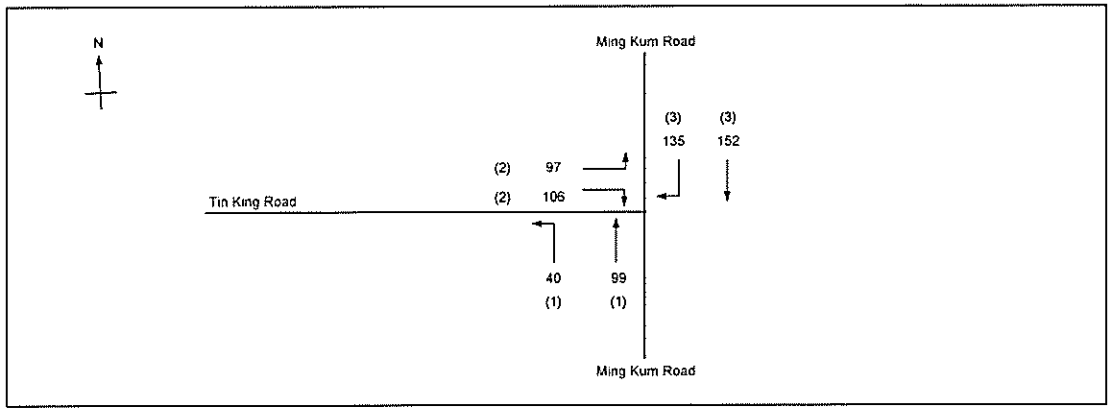


Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	83	3
P7	A,C	5.5	5	5	6	33	5
P8	B,C,D	7.0	5	6	1	61	6
P9	C	7.5	5	6	1	11	6

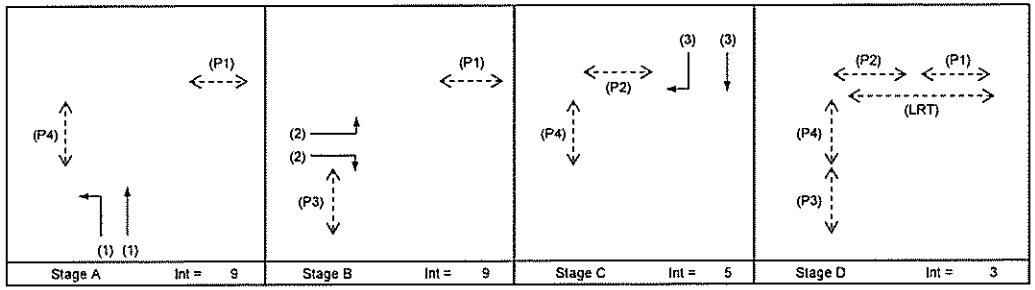
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	63	83		145	0.43	1926			1926	0.075			19	20	0.381	18	34
RT	A	3.70	3	1	18			2125			105	105	1.00	1962			1962	0.054	0.054		13	20	0.270	12	32
LT,SA,RT	B	3.50	1	1	15		N	1965	41	22	47	110	0.80	1819			1819	0.060	0.060		15	16	0.381	12	38
LT,SA	D	3.30	2	1	13		N	1945	86	168		254	0.34	1872			1872	0.135	0.135		34	25	0.527	30	33
RT	D	3.30	2	1	17	O		2085			54	54	1.00	1705	10	59	1764	0.030			8	25	0.118	6	26
LT,SA	D	3.40	4	1	13		N	1955	101	118		219	0.46	1856			1856	0.118			29	25	0.459	24	31
RT	D	3.80	4	1	20	O		2135			50	50	1.00	1772	18	107	1879	0.027			7	25	0.104	6	26
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO. 81460	Prepared By:	KL	May-19
J8: Tin King Road / Ming Kum Road	2018 CY	FILENAME :	Checked By:	MM	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	May-19



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	90 sec
Sum(y)		Y =	0.162
Loss time		L =	43 sec
Total Flow		=	628 pcu
Co	= (1.5*L+5)/(1-Y)	=	82.9 sec
Cm	= L/(1-Y)	=	51.3 sec
Yult		=	0.578
R.C.ult	= (Yult-Y)/Y*100%	=	257.4 %
Cp	= 0.9*L/(0.9-Y)	=	52.4 sec
Ymax	= 1-L/C	=	0.522
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	190.9 %



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		35	6
P2	C	6.8	5	6		21	6
P3	B	4.5	5	4		16	4
P4	A,C	6.8	5	6		36	6

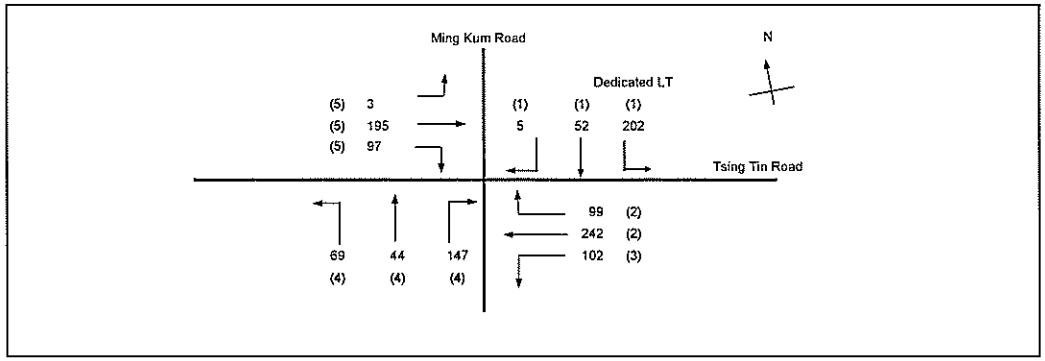
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.40	1	1	18			2095	40	27		67	0.60	1996			1996	0.034			10	11	0.275	8	35
SA	A	3.80	1	1				2135		72		72	0.00	2135			2135	0.034	0.034		10	11	0.275	8	35
LT	B	3.30	2	1	15		N	1945	97			97	1.00	1768			1768	0.055	0.055		16	17	0.219	8	30
RT	B	3.30	2	1	21			2085			106	106	1.00	1946			1946	0.054			16	17	0.219	12	30
SA	C	3.40	3	1			N	1955		143		143	0.00	1955			1955	0.073			21	19	0.147	12	29
SA,RT	C	3.50	3	1	18			2105		8	135	143	0.94	1952			1952	0.073	0.073		21	19	0.147	12	29
LRT	D																			20		20			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

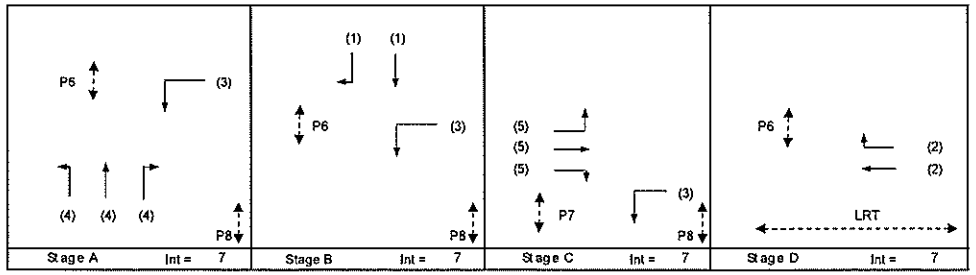
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	2018 CY	PROJECT NO.: 81460	Prepared By:	KL	May-19
J9: Tsing Tin Road / Ming Kum Road		FILENAME :	Checked By:	MM	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J9_Tsing Tin Road_Ming Kum Road_S.xls	Reviewed By:	OC	May-19



		Existing Cycle Time
No. of stages per cycle	N =	4
Cycle time	C =	145 sec
Sum(y)	Y =	0.235
Loss time	L =	24 sec
Total Flow	=	1054 pcu
Co = (1.5*L+5)/(1-Y)	=	53.6 sec
Cm = L/(1-Y)	=	31.4 sec
Yult	=	0.720
R.C.ult = (Yult-Y)/Y*100%	=	206.4 %
Cp = 0.9*L/(0.9-Y)	=	32.5 sec
Ymax = 1-L/C	=	0.834
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	220 %

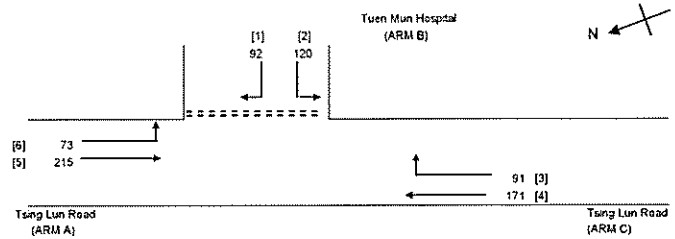


Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		107	8
P7	C	5	5	4	5	12	4
P8	A,B,C	8	5	7		41	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				24					
LT	A	3.30	4	1	12		N	1945	69			69	1.00	1729			1729	0.040			20	18	0.419	12	56
SA,RT	A	3.30	4	1	18			2085		44	58	102	0.00	2085			2085	0.049	0.049		25	18	0.594	18	57
RT	A	3.30	4	1	16			2085			89	89	1.65	1806			1806	0.049			25	18	0.587	18	57
LT	A,B,C	3.50	3	1	21		N	1965	102			102	1.00	1834			1834	0.056			29	62	0.139	12	23
SA	B	3.30	1	2			N	4030		52		52	0.00	4030			4030	0.013	0.013		7	14	0.133	3	55
RT	B	3.30	1	1	20			2085			5	5	1.00	1940			1940	0.002			1	14	0.024	0	54
LT,SA	C	3.40	5	1	13		N	1955	3	93		96	0.03	1948			1948	0.049			25	18	0.447	18	60
SA,RT	C	3.40	5	1	15			2095		102	2	103	0.01	2092			2092	0.049	0.049		25	18	0.448	18	60
RT	C	3.40	5	1	18			2095			95	95	1.00	1934			1934	0.049			25	18	0.447	18	60
SA	D	3.40	2	1			N	1955		242		242	0.00	1955			1955	0.124	0.124		64	55	0.250	30	21
RT	D	3.40	2	2	18		N	4050			99	99	1.00	3738			3738	0.026			14	55	0.058	6	18

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	2018 CY	PROJECT NO.: 81460	PREPARED BY:	TZ	May-19
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	May-19



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	9.40	(metres)
W cr	=	0	(metres)
q a-b	=	73	(pcu/hr)
q a-c	=	215	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	6.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	171	(pcu/hr)
q c-b	=	91.408	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	50	(metres)
Vr b-a	=	20	(metres)
Vr b-c	=	20	(metres)
q b-a	=	92	(pcu/hr)
q b-c	=	120	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.08456166
E	=	1.153789
F	=	1.1939238
Y	=	0.6757
F for (Qb-ac)	=	0.567010309

THE CAPACITY OF MOVEMENT :

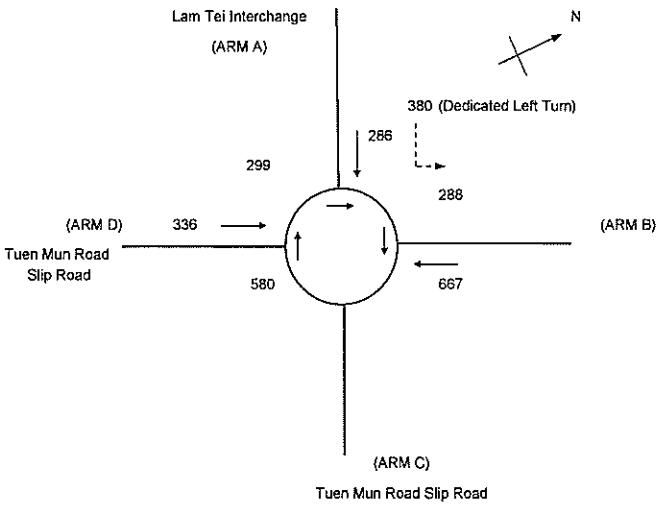
Q b-a	=	551			
Q b-c	=	790	Q b-c (O) =	757.08	
Q c-b	=	808			
Q b-ac	=	665.09			
TOTAL FLOW	=	762.5315126	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1667
DFC b-c	=	0.1522
DFC c-b	=	0.1131
DFC b-c (share lane)	=	0.3189

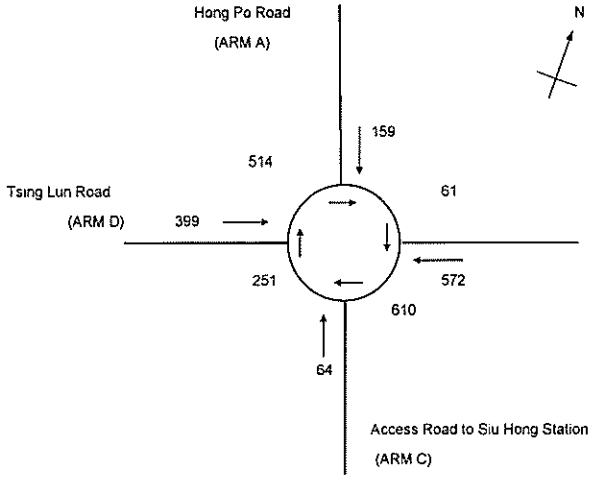
CRITICAL DFC = 0.32

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	KL	May-19
J11 : Lam Tei Interchange	2018 CY	FILENAME :	CHECKED BY:	MM	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	May-19



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	3.0	3.9		3.2			
E	=	Entry width (m)	7.6	10.2		8.0			
L	=	Effective length of flare (m)	10.0	3.0		16.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	89.0	89.0		89.0			
A	=	Entry angle (degree)	30.0	29.0		32.0			
Q	=	Entry flow (pcu/h)	286	667		336			
Qc	=	Circulating flow across entry (pcu/h)	299	288		580			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.74	3.36		0.48			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.02			
X2	=	V + ((E-V)/(1+2S))	4.86	4.72		5.65			
M	=	EXP((D-60)/10)	18	18		18			
F	=	303*X2	1473	1429		1712			
Td	=	1+(0.5/(1+M))	1.03	1.03		1.03			
Fc	=	0.21*Td(1+0.2*X2)	0.42	0.42		0.46			
Qe	=	K(F-Fc*Qc)	1391	1346		1479	Total In Sum =	1289	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.21	0.50		0.23	DFC of Critical Approach =	0.50	

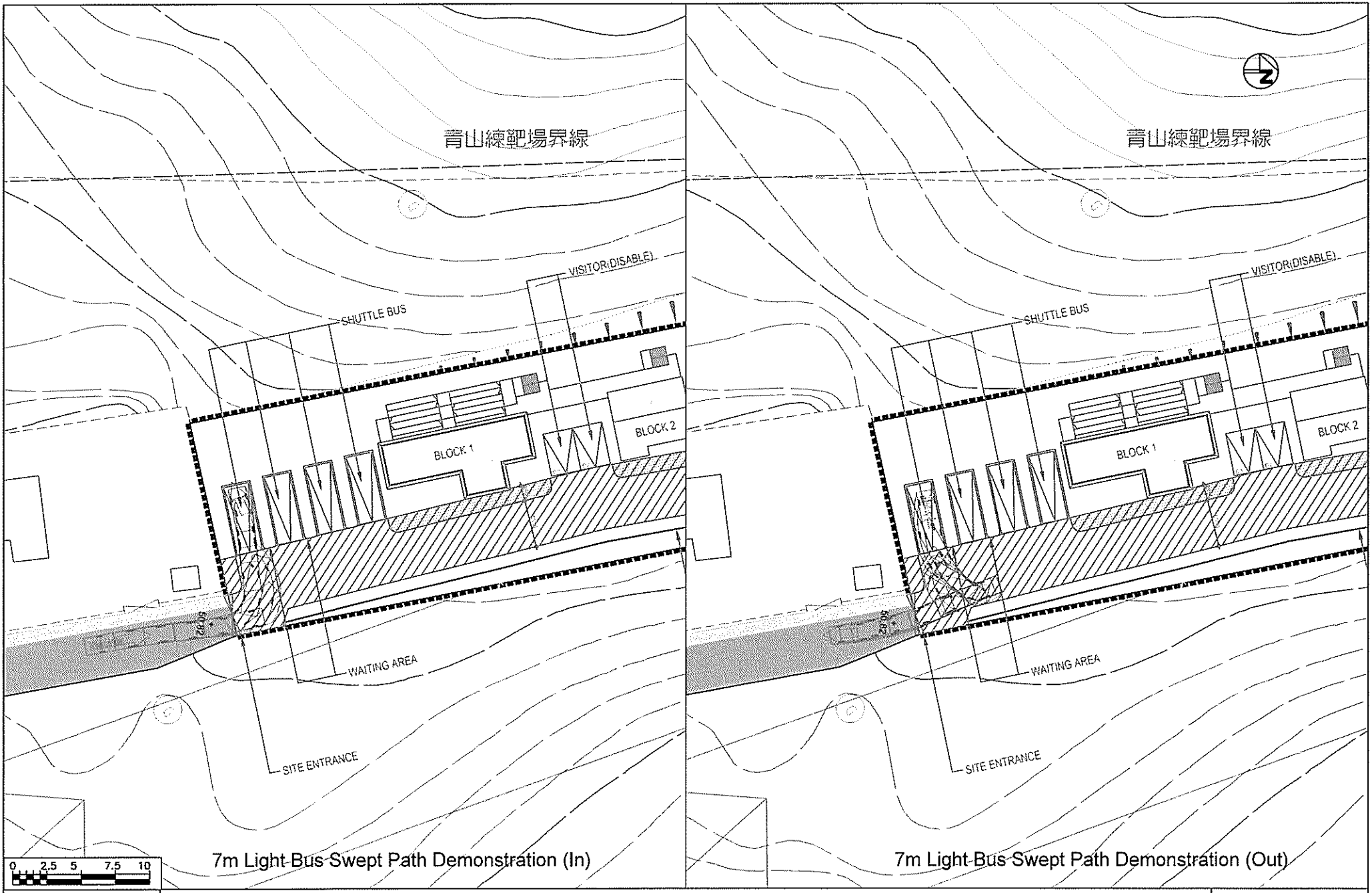
OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	TZ	May-19
J12 : Tsing Lun Road / Hong Po Road	2018 CY	FILENAME :	CHECKED BY:	MM	May-19
2018 Chung Yeung Observed Peak Hour Traffic Flows		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	May-19



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	2.8	3.4	3.3	4.2			
E	=	Entry width (m)	9.0	9.5	8.4	7.4			
L	=	Effective length of flare (m)	7.0	10.0	8.0	24.0			
R	=	Entry radius (m)	30.0	12.0	35.0	42.0			
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0			
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0			
Q	=	Entry flow (pcu/h)	159	571.6	64	399			
Qc	=	Circulating flow across entry (pcu/h)	514	60.8	610	251			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.21			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03			
X2	=	V + ((E-V)/(1+2S))	4.42	5.5	4.93	6.44			
M	=	EXP((D-60)/10)	12	12.2	12	12			
F	=	303*X2	1338	1656.3	1495	1952			
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04			
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50			
Qe	=	K(F-Fc*Qc)	1087	1473.8	1171	1874	Total In Sum =	1193	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.15	0.4	0.05	0.21	DFC of Critical Approach =	0.39	

Appendix B

Swept Path Assessment



OZZO TECHNOLOGY

Date 22/05/2019 | Scale 1:250

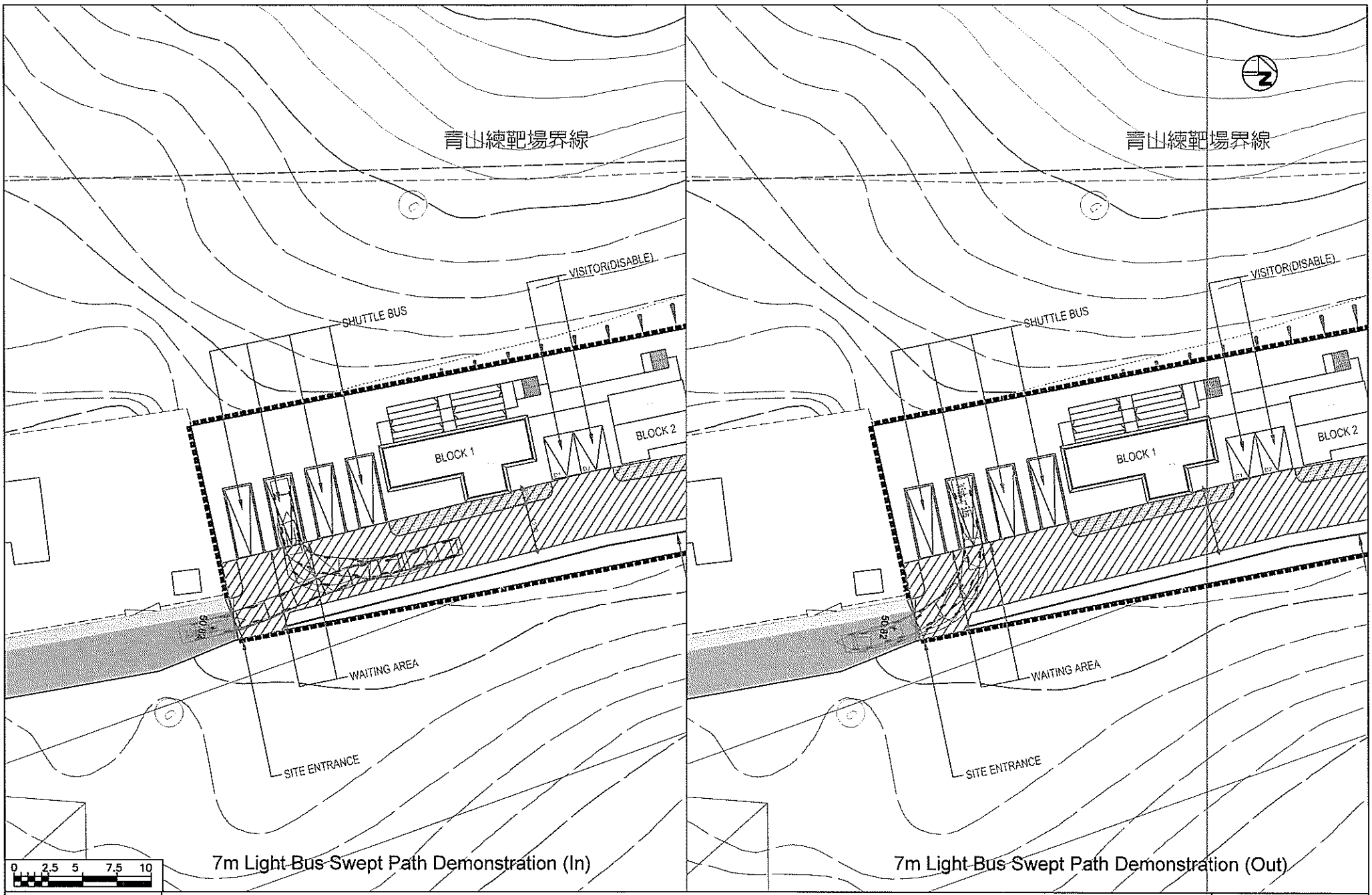
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Swept Path Assessments - 1

天罡隆義

Project No. 81460 | Rev. -

Dwg No. Appendix B-1



OZO TECHNOLOGY

Date 22/05/2019 | Scale 1:250

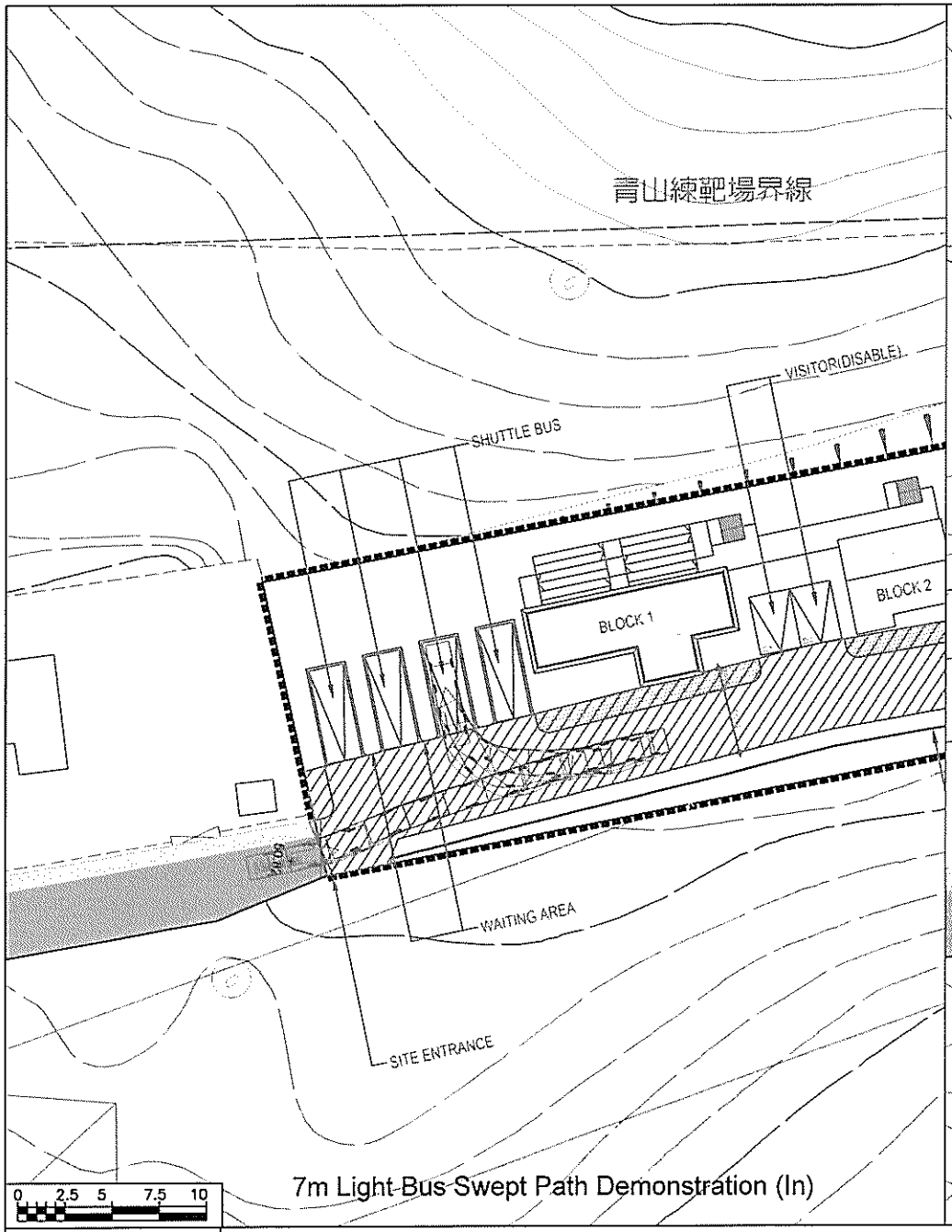
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Swept Path Assessments - 2

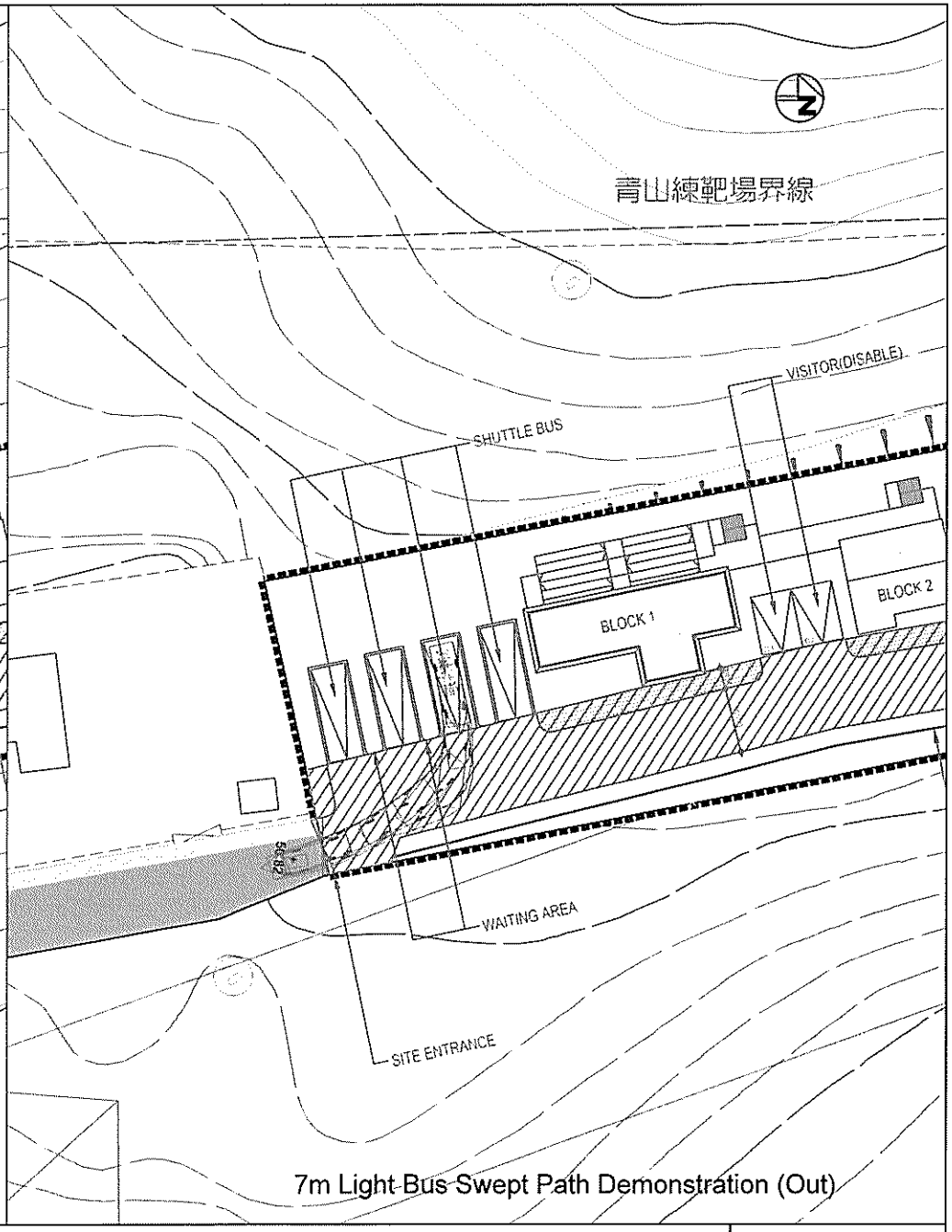
天罡隆義

Project No. 81460 | Rev. -

Dwg No. Appendix B-2



7m Light Bus Swept Path Demonstration (In)



7m Light Bus Swept Path Demonstration (Out)

OZZO TECHNOLOGY

Date 22/05/2019 | Scale 1:250

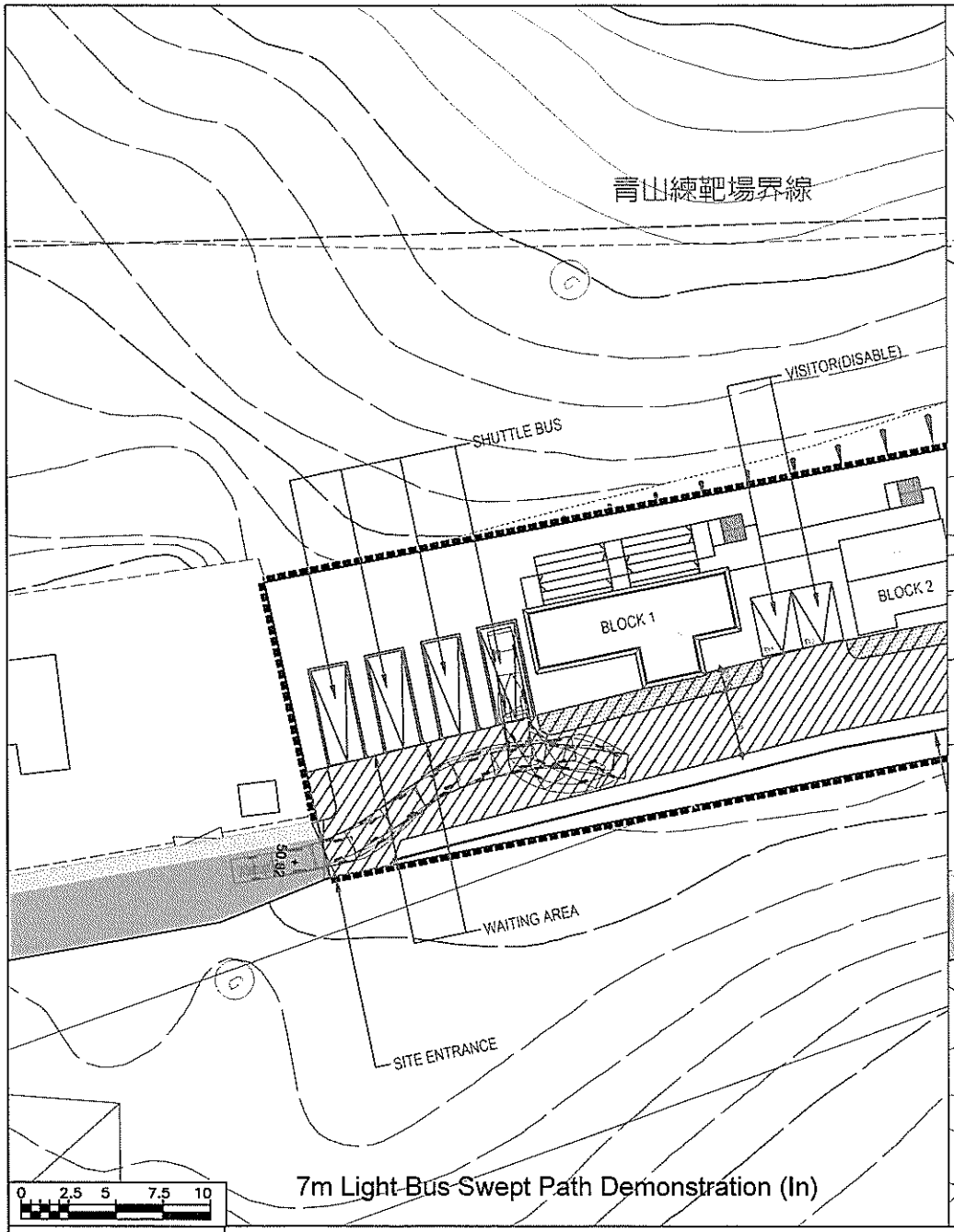
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

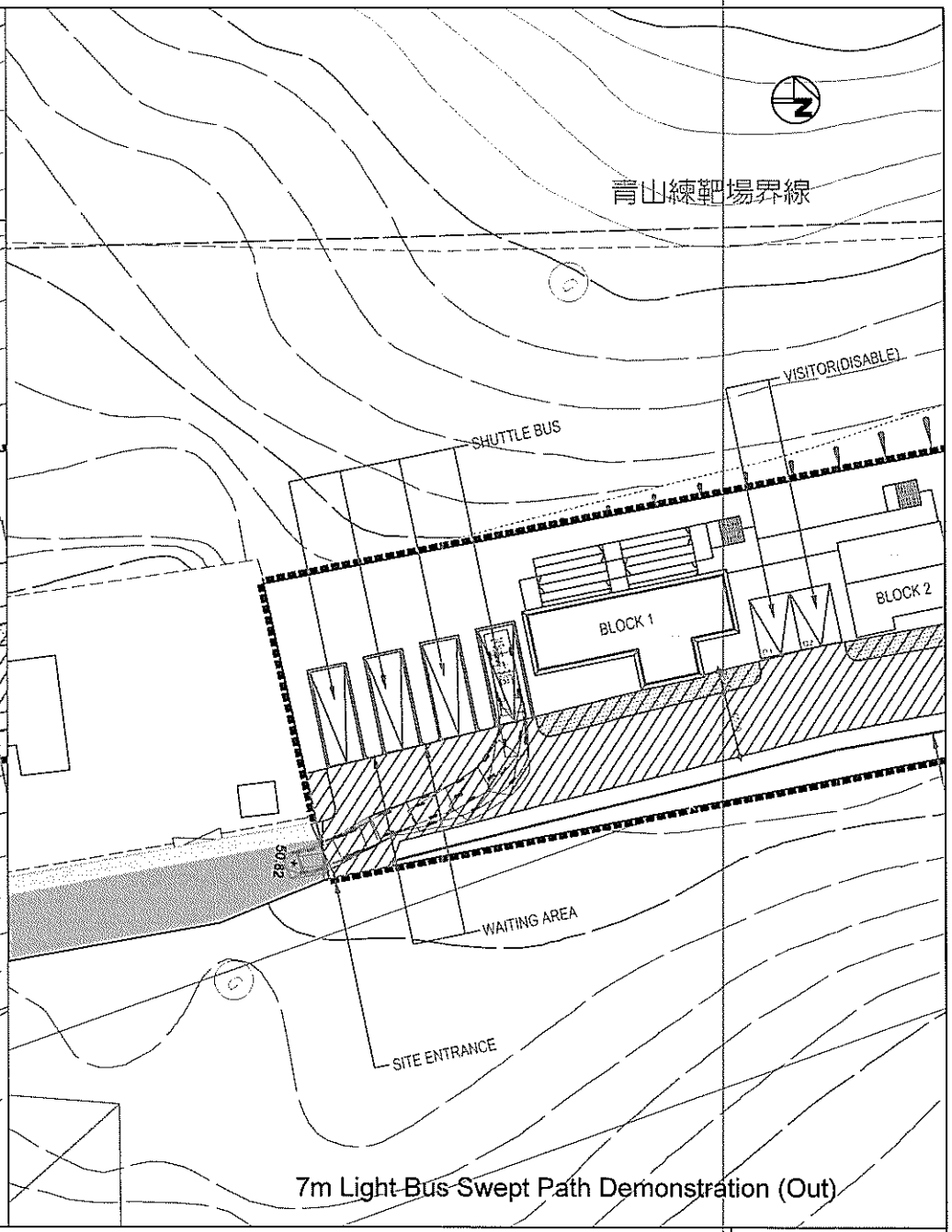
Swept Path Assessments - 3

天罡隆義

Project No. 81460 | Rev. -

Dwg No. Appendix B-3





0 2.5 5 7.5 10

OZZO TECHNOLOGY

Date 22/05/2019 | Scale 1:250

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Swept Path Assessments - 4

天罡隆義

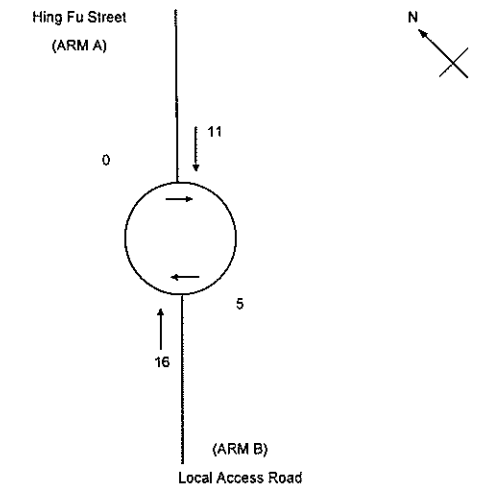
Project No. 81460 | Rev. -

Dwg No. Appendix B-4

Appendix C

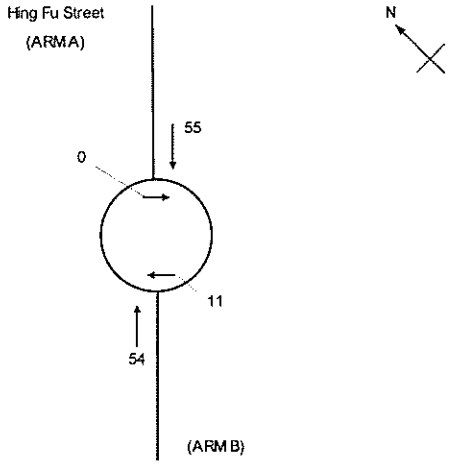
2028 Junction Calculation Sheets

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	TZ	May-19
J1 : Hing Fu Street Roundabout	2028 Ref	FILENAME :	CHECKED BY:	MM	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	May-19



ARM			A	B			
INPUT PARAMETERS:							
V	=	Approach half width (m)	3.3	2.2			
E	=	Entry width (m)	3.4	3.4			
L	=	Effective length of flare (m)	1.0	1.0			
R	=	Entry radius (m)	10.0	6.0			
D	=	Inscribed circle diameter (m)	12.0	12.0			
A	=	Entry angle (degree)	30.0	54.0			
Q	=	Entry flow (pcu/h)	11	16			
Qc	=	Circulating flow across entry (pcu/h)	0	5			
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L	0.11	2.00			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.95	0.80			
X2	=	V + ((E-V)/(1+2S))	3.36	2.40			
M	=	EXP((D-60)/10)	0	0			
F	=	303*X2	1017	727			
Td	=	1+(0.5/(1+M))	1.50	1.50			
Fc	=	0.21*Td(1+0.2*X2)	0.53	0.46			
Qe	=	K(F-Fc*Qc)	967	582	Total In Sum =	27	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.01	0.03	DFC of Critical Approach =	0.03	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	TZ	May-19
J1 : Hing Fu Street Roundabout	2028 Des	FILENAME :	CHECKED BY:	MM	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	May-19

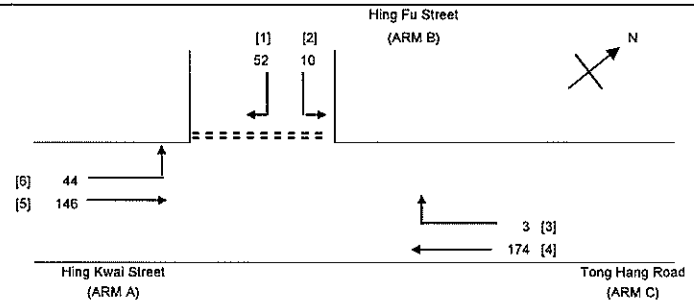


ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.3	2.2
E	=	Entry width (m)	3.4	3.4
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	30.0	54.0
Q	=	Entry flow (pcu/h)	55	54
Qc	=	Circulating flow across entry (pcu/h)	0	11
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	0.11	2.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.95	0.80
X2	=	V + ((E-V)/(1+2S))	3.36	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	1017	727
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.53	0.46
Qe	=	K(F-Fc*Qc)	967	580
DFC	=	Design flow/Capacity = Q/Qe	0.06	0.09

Total In Sum = 109 PCU

DFC of Critical Approach = 0.09

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	KL	May-19
J2 : Hing Kwai Street / Tong Hang Street / Hing Fu Street	**2028 Ref**	FILENAME :	CHECKED BY:	TZ	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows		J2_Hing Fu Street_Hing Kwai Street_P.xls	REVIEWED BY:	MM	May-19



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.00	(metres)
W cr	=	0.3	(metres)
q a-b	=	44	(pcu/hr)
q a-c	=	146	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	7.00	(metres)
Vr c-b	=	35	(metres)
q c-a	=	173.8	(pcu/hr)
q c-b	=	3.482	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	40	(metres)
Vr b-a	=	35	(metres)
Vr b-c	=	35	(metres)
q b-a	=	52	(pcu/hr)
q b-c	=	10	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8503871
E	=	0.9104787
F	=	1.2143102
Y	=	0.7585
F for (Qb-ac)	=	0.1562451

THE CAPACITY OF MOVEMENT :

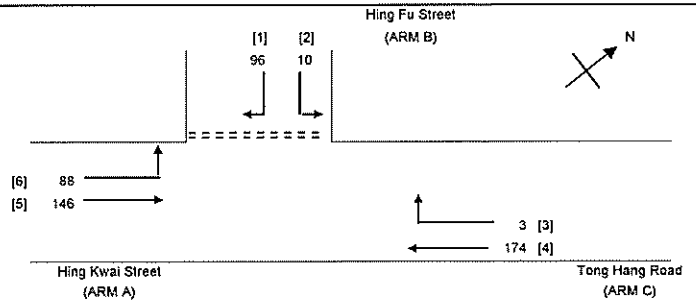
Q b-a	=	472			
Q b-c	=	537	Q b-c (O) =	619.4	
Q c-b	=	841			
Q b-ac	=	491.9			
TOTAL FLOW	=	428.7231887	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1103
DFC b-c	=	0.0151
DFC c-b	=	0.0041
DFC b-ac	=	0.1255

CRITICAL DFC = 0.13

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	KL	May-19
J2 : Hing Kwai Street / Tong Hang Street / Hing Fu Street	**2028 Des**	FILENAME :	CHECKED BY:	TZ	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows		J2_Hing Fu Street_Hing Kwai Street_P.xls	REVIEWED BY:	MM	May-19



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.00	(metres)
W cr	=	0.3	(metres)
q a-b	=	88	(pcu/hr)
q a-c	=	146	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	7.00	(metres)
Vr c-b	=	35	(metres)
q c-a	=	173.8	(pcu/hr)
q c-b	=	3.482	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	40	(metres)
Vr b-a	=	35	(metres)
Vr b-c	=	35	(metres)
q b-a	=	96	(pcu/hr)
q b-c	=	10	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8503871
E	=	0.9104787
F	=	1.2143102
Y	=	0.7585
F for (Qb-ac)	=	0.0912118

THE CAPACITY OF MOVEMENT :

Q b-a	=	467			
Q b-c	=	633	Q b-c (O) =	600.4	
Q c-b	=	826			
Q b-ac	=	478.4			
TOTAL FLOW	=	516.7231887	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

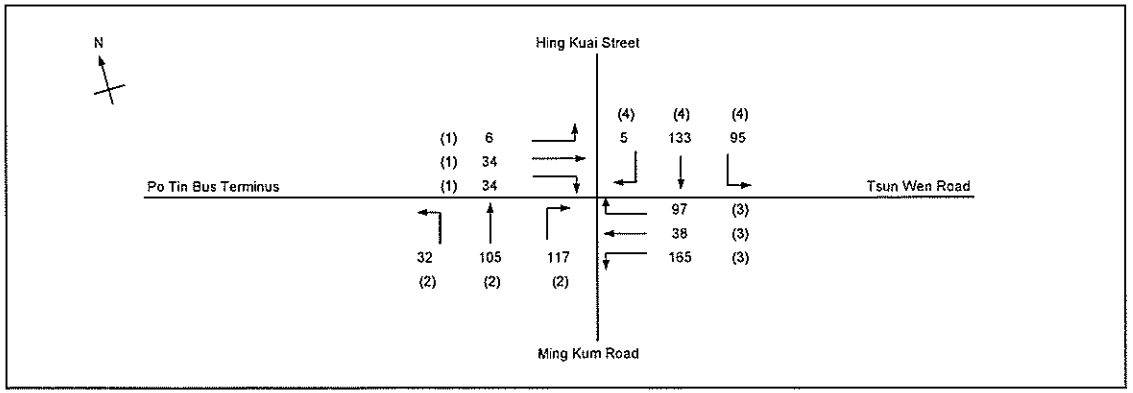
DFC b-a	=	0.2057
DFC b-c	=	0.0152
DFC c-b	=	0.0042
DFC b-ac	=	0.2209

CRITICAL DFC = 0.22

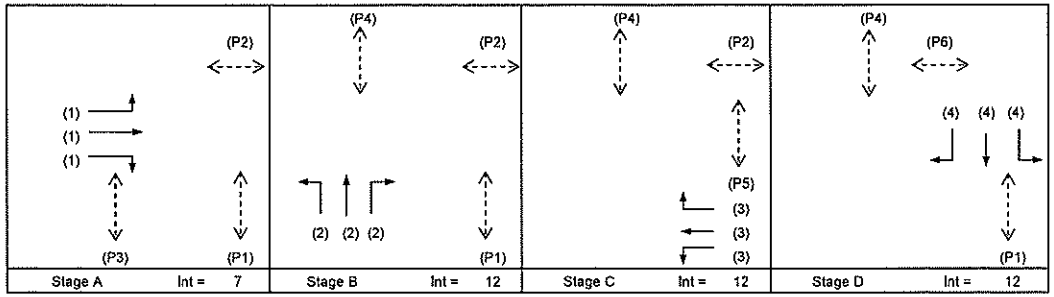
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	PROJECT NO. 81460	Prepared By:	KL	May-19
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	**2028 Ref**	Checked By:	TZ	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows	FILENAME : J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	MM	May-19



			Existing Cycle Time
No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.231	
Loss time	L =	39	sec
Total Flow	=	860	pcu
Co = (1.5*L+5)/(1-Y)	=	82.6	sec
Cm = L/(1-Y)	=	50.7	sec
Yult	=	0.608	
R.C.ult = (Yult-Y)/Y*100%	=	163.1	%
Cp = 0.9*L/(0.9-Y)	=	52.5	sec
Ymax = 1-L/C	=	0.567	
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	120.9	%



	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		40	8
P2	A,B,C	7.2	5	6		44	6
P3	A	10.0	5	8		4	8
P4	B,C,D	12.3	5	10		46	10
P5	C	8.5	5	7		14	7
P6	D	8.6	5	7		12	7

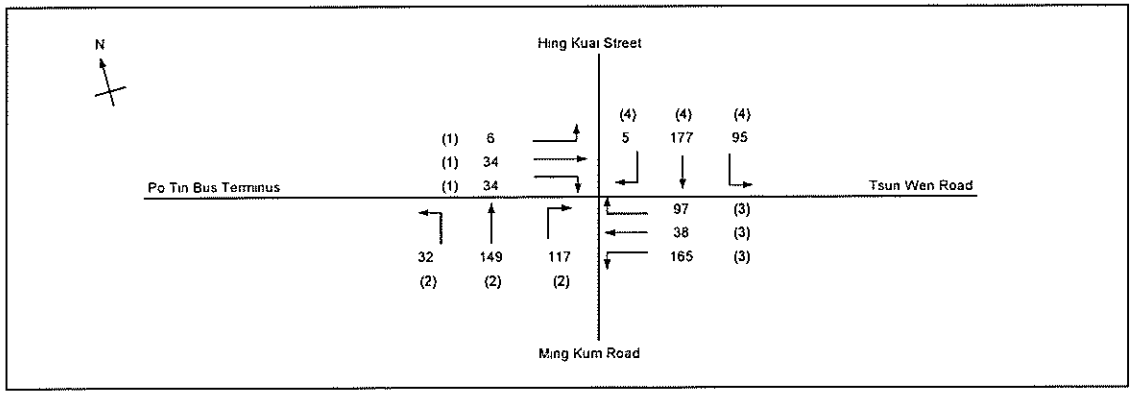
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	6			6	1.00	1870			1870	0.00			1	15	0.020	0	28
RT,SA	A	4.60	1	1	24		N	2075		34	34	67	0.50	2012			2012	0.03	0.03		7	15	0.201	6	30
LT,SA	B	3.40	2	1	11			2095	32	22		54	0.60	1937			1937	0.03			6	13	0.195	6	32
SA	B	3.50	2	1				2105		83		83	0.00	2105			2105	0.04			9	13	0.274	6	33
RT	B	3.50	2	1	26			2105			117	117	1.00	1990			1990	0.06	0.06		13	13	0.406	12	35
LT	C	3.30	3	1	17		N	1945	105			105	1.00	1787			1787	0.06			13	9	0.590	12	48
SA,LT	C	3.40	3	1	20			2095	60	38		98	0.61	2003			2003	0.05	0.06		11	9	0.480	12	42
RT	C	3.40	3	1	25			2095			97	97	1.00	1976			1976	0.05			11	9	0.492	12	42
LT,SA	D	3.70	4	1	16		N	1985	95	55		150	0.63	1874			1874	0.08			18	11	0.653	18	47
RT,SA	D	3.70	4	1	20			2125		78	5	83	0.06	2116			2116	0.04	0.08		9	11	0.320	6	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

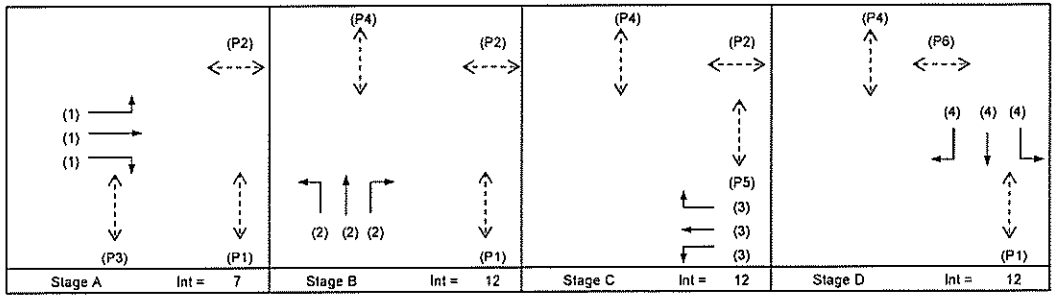
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	PROJECT NO. 81460	Prepared By:	KL	May-19
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	**2028 Des**	Checked By:	TZ	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows	FILENAME : J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	MM	May-19



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	90	sec
Sum(y)		Y =	0.255	
Loss time		L =	39	sec
Total Flow		=	948	pcu
Co	= (1.5*L+5)/(1-Y)	=	85.2	sec
Cm	= L/(1-Y)	=	52.3	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	138.5	%
Cp	= 0.9*L/(0.9-Y)	=	54.4	sec
Ymax	= 1-L/C	=	0.567	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	100.2	%

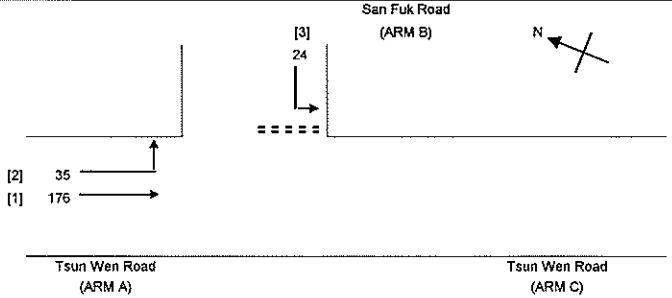


	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		37	8
P2	A,B,C	7.2	5	6		41	6
P3	A	10.0	5	8		4	8
P4	B,C,D	12.3	5	10		43	10
P5	C	8.5	5	7		13	7
P6	D	8.6	5	7		11	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	6			6	1.00	1870			1870	0.00			1	15	0.020	0	24
RT,SA	A	4.60	1	1	24		N	2075		34	34	67	0.50	2012			2012	0.03	0.03		7	15	0.231	6	30
LT,SA	B	3.40	2	1	11			2095	32	22		54	0.60	1937			1937	0.03			6	13	0.185	6	32
SA	B	3.50	2	1				2105		127		127	0.00	2105			2105	0.06			12	13	0.417	12	35
RT	B	3.50	2	1	26			2105			117	117	1.00	1990			1990	0.06	0.06		12	13	0.406	12	35
LT	C	3.30	3	1	17		N	1945	105			105	1.00	1787			1787	0.06			12	9	0.590	12	43
SA,LT	C	3.40	3	1	20			2095	60	38		98	0.61	2003			2003	0.05	0.06		10	9	0.488	12	42
RT	C	3.40	3	1	25			2095			97	97	1.00	1976			1976	0.05			10	9	0.492	12	42
LT,SA	D	3.70	4	1	16		N	1985	95	99		194	0.49	1898			1898	0.10			20	11	0.835	30	70
RT,SA	D	3.70	4	1	20			2125		78	5	83	0.06	2116			2116	0.04	0.10		8	11	0.320	6	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	KL	May-19
J4 : Tsun Wen Road / San Fuk Road	**2028 Ref**	FILENAME :	CHECKED BY:	TZ	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	MM	May-19



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.60	(metres)
W cr	=	0	(metres)
q a-b	=	35	(pcu/hr)
q a-c	=	176	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.50	(metres)
Vl b-a	=	25	(metres)
Vr b-a	=	25	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	24	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5556799
E	=	0.9632708
F	=	0.5859548
Y	=	0.7378

THE CAPACITY OF MOVEMENT :

Q b-a	=	320		
Q b-c	=	669	Q b-c (O) =	669
Q c-b	=	403		

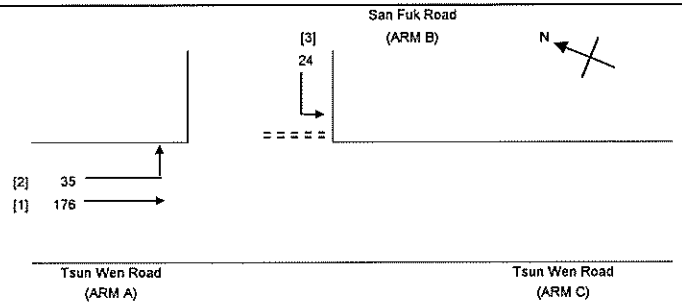
TOTAL FLOW = 235.0095171 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0356
DFC c-b	=	0.0000

CRITICAL DFC = 0.04

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	KL	May-19
J4 : Tsun Wen Road / San Fuk Road	**2028 Des**	FILENAME :	CHECKED BY:	TZ	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	MM	May-19



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.60	(metres)
W cr	=	0	(metres)
q a-b	=	35	(pcu/hr)
q a-c	=	176	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.50	(metres)
Vl b-a	=	25	(metres)
Vr b-a	=	25	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	24	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5556799
E	=	0.9632708
F	=	0.5859548
Y	=	0.7378

THE CAPACITY OF MOVEMENT :

Q b-a	=	320			
Q b-c	=	669	Q b-c (O) =	669	
Q c-b	=	403			

TOTAL FLOW = 235.0095171 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

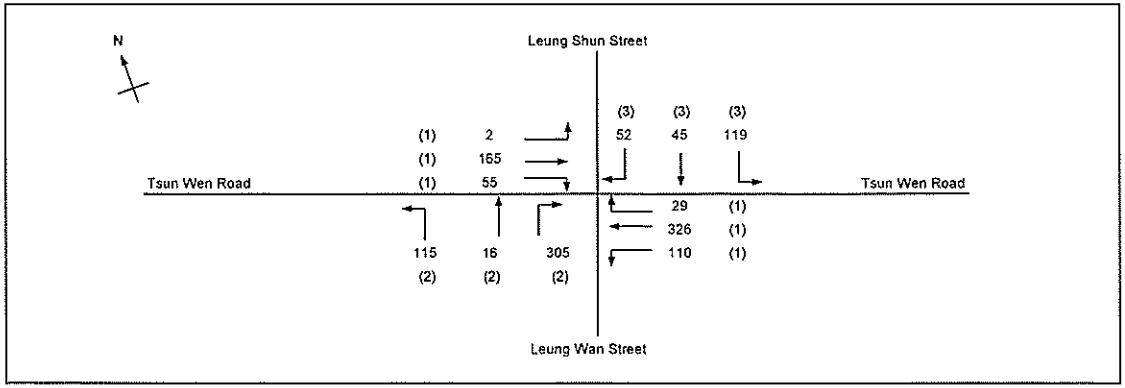
DFC b-a	=	0.0000
DFC b-c	=	0.0356
DFC c-b	=	0.0000

CRITICAL DFC = 0.04

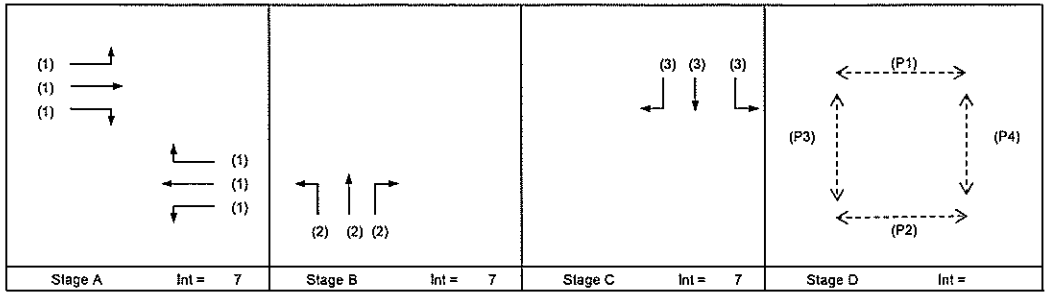
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	PROJECT NO. 81460	Prepared By:	KL	May-19
J5: Tsun Wen Road / Leung Wan Street	**2028 Ref**	Checked By:	TZ	May-19
2028 Chung Yeung Reference Hour Traffic Flows	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	MM	May-19



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.439	
Loss time		L =	46	sec
Total Flow		=	1340	pcu
Co	= (1.5*L+5)/(1-Y)	=	132.0	sec
Cm	= L/(1-Y)	=	82.1	sec
Yult		=	0.555	
R.C.ult	= (Yult-Y)/Y*100%	=	26.3	%
Cp	= 0.9*L/(0.9-Y)	=	89.9	sec
Ymax	= 1-L/C	=	0.617	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	26.3	%



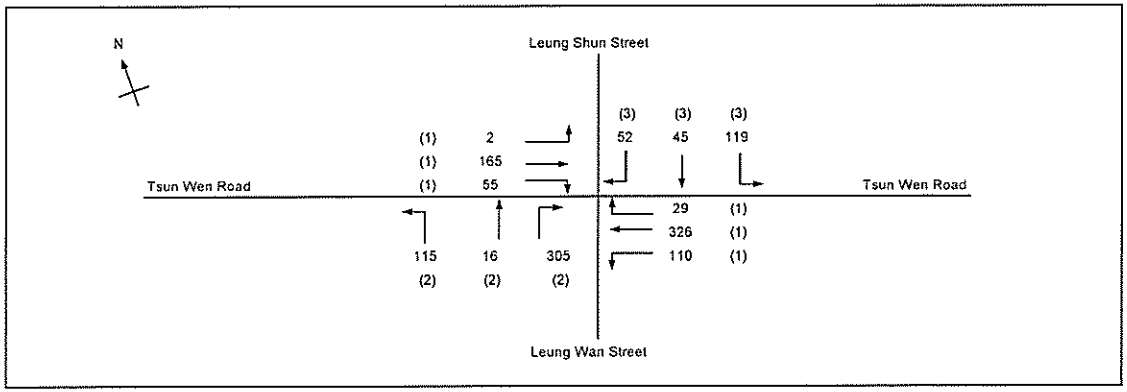
Stage A Int = 7 | Stage B Int = 7 | Stage C Int = 7 | Stage D Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		22	6
P2	D	18.0	5	15		13	15
P3	D	19.5	5	16		12	16
P4	D	21.4	5	18		10	18

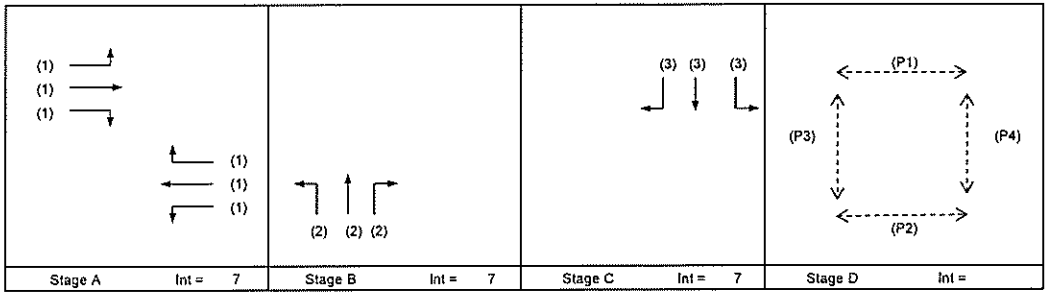
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	2	78		81	0.03	1937			1937	0.042			7	21	0.293	12	40
SA	A	3.30	1	1				2085		87		87	0.00	2085			2085	0.042			7	21	0.238	12	40
RT	A	3.30	1	1	30	O		2085			55	55	1.00	1767	12	60	1827	0.030			5	21	0.172	6	39
LT,SA	A	3.30	1	1	10		N	1945	110	91		202	0.55	1798			1798	0.112			19	21	0.641	30	51
SA	A	3.40	1	1				2095		235		235	0.00	2095			2095	0.112	0.112		19	21	0.641	36	49
RT	A	3.40	1	1	30	O		2095			29	29	1.00	1776	12	60	1836	0.016			3	21	0.090	0	38
LT,SA,RT	B	5.50	2	1	25		N	2165	115	16	305	436	0.96	2047			2047	0.213	0.213		36	33	0.775	60	46
LT,SA,RT	C	3.60	3	1	25		N	1975	119	45	52	215	0.79	1885			1885	0.114	0.114		19	20	0.685	36	54
PED	D																			28		23			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO. 81460	Prepared By:	KL	May-19
J5: Tsun Wen Road / Leung Wan Street	2028 Des	FILENAME :	Checked By:	TZ	May-19
2028 Chung Yeung Design Hour Traffic Flows		J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	MM	May-19



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.439	
Loss time		L =	45	sec
Total Flow		=	1340	pcu
Co	= (1.5*L+5)/(1-Y)	=	132.0	sec
Cm	= L/(1-Y)	=	82.1	sec
Yult		=	0.555	
R.C.ult	= (Yult-Y)/Y*100%	=	26.3	%
Cp	= 0.9*L/(0.9-Y)	=	89.9	sec
Ymax	= 1-L/C	=	0.617	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	26.3	%



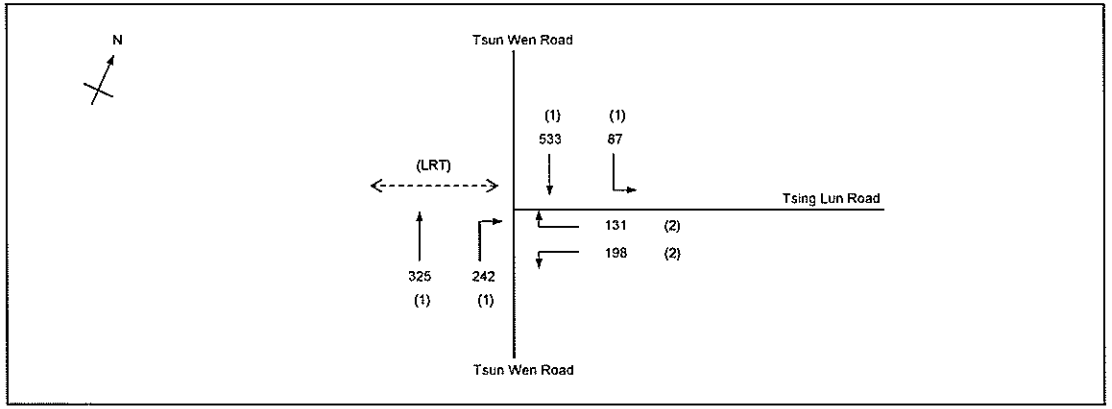
Stage A	Int = 7	Stage B	Int = 7	Stage C	Int = 7	Stage D	Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		22	6
P2	D	18.0	5	15		13	15
P3	D	19.5	5	16		12	16
P4	D	21.4	5	18		10	18

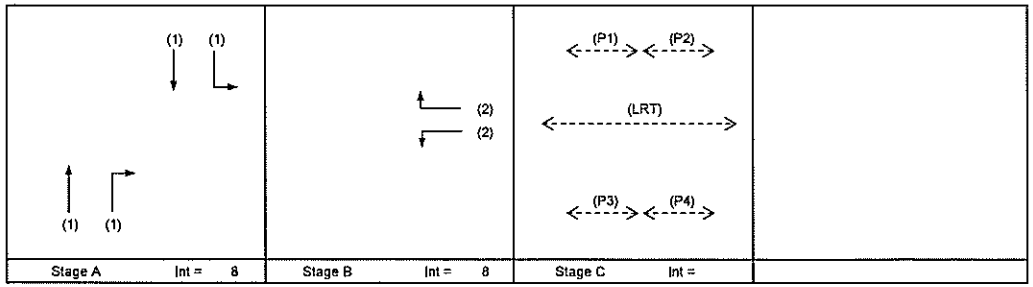
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	2	78		81	0.03	1937			1937	0.042			7	21	0.218	12	40
SA	A	3.30	1	1				2085		87		87	0.00	2085			2085	0.042			7	21	0.234	12	40
RT	A	3.30	1	1	30	O		2085			55	55	1.00	1767	12	60	1827	0.030			5	21	0.172	6	39
LT,SA	A	3.30	1	1	10		N	1945	110	91		202	0.55	1798			1798	0.112			19	21	0.641	30	51
SA	A	3.40	1	1				2095		235		235	0.00	2095			2095	0.112	0.112		19	21	0.641	36	49
RT	A	3.40	1	1	30	O		2095			29	29	1.00	1776	12	60	1836	0.016			3	21	0.039	0	38
LT,SA,RT	B	5.50	2	1	25		N	2165	115	16	305	436	0.96	2047			2047	0.213	0.213		36	33	0.775	60	46
LT,SA,RT	C	3.60	3	1	25		N	1975	119	45	52	215	0.79	1885			1885	0.114	0.114		19	20	0.535	36	54
PED	D																			26		28			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO. 81460	Prepared By:	KL	May-19
J6: Tsing Lun Road / Tsun Wen Road	**2028 Ref**	FILENAME :	Checked By:	TZ	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows		J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	MM	May-19



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	72	sec
Sum(y)		Y =	0.230	
Loss time		L =	36	sec
Total Flow		=	1199	pcu
Co	= (1.5*L+5)/(1-Y)	=	76.6	sec
Cm	= L/(1-Y)	=	46.7	sec
Yult		=	0.630	
R.C.ult	= (Yult-Y)/Y*100%	=	174.3	%
Cp	= 0.9*L/(0.9-Y)	=	48.3	sec
Ymax	= 1-L/C	=	0.500	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	95.9	%



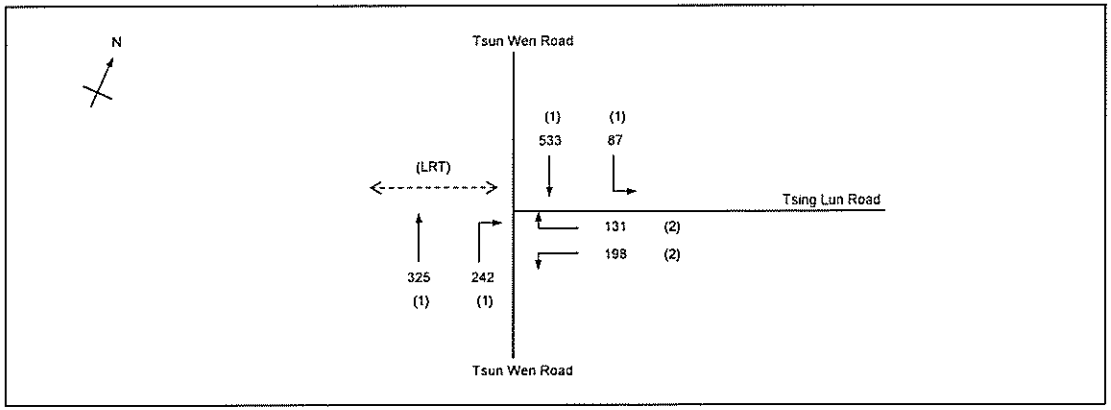
Stage A	Int = 8	Stage B	Int = 8	Stage C	Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

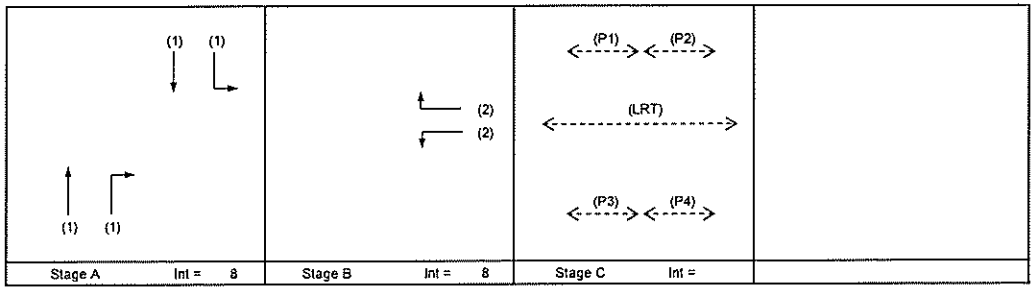
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		221		221	0.00	4030			4030	0.055			9	21	0.185	3	18
RT	A	3.50	1	1	10	O		2105			209	209	1.00	1630	12	100	1730	0.120	0.120		19	21	0.413	12	21
LT	A	3.30	1	1	10		N	1945	75			75	1.00	1691			1691	0.044			7	21	0.152	6	18
SA	A	3.30	1	2	10			4170		367		367	0.00	4170			4170	0.088			14	21	0.302	15	18
LT	B	3.30	2	1	10			2085	198			198	1.00	1813			1813	0.109	0.109		17	15	0.524	18	28
RT	B	3.50	2	1	10			2105			131	131	1.00	1830			1830	0.071			11	15	0.342	12	24
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO. 81460	Prepared By:	KL	May-19
J6: Tsing Lun Road / Tsun Wen Road	2028 Des	FILENAME :	Checked By:	TZ	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows		J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	MM	May-19



			Existing Cycle Time
No. of stages per cycle		N =	3
Cycle time		C =	72 sec
Sum(y)		Y =	0.230
Loss time		L =	36 sec
Total Flow		=	1199 pcu
Co	= (1.5*L+5)/(1-Y)	=	76.6 sec
Cm	= L/(1-Y)	=	46.7 sec
Yult		=	0.630
R.C.ult	= (Yult-Y)/Y*100%	=	174.3 %
Cp	= 0.9*L/(0.9-Y)	=	48.3 sec
Ymax	= 1-L/C	=	0.500
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	95.9 %

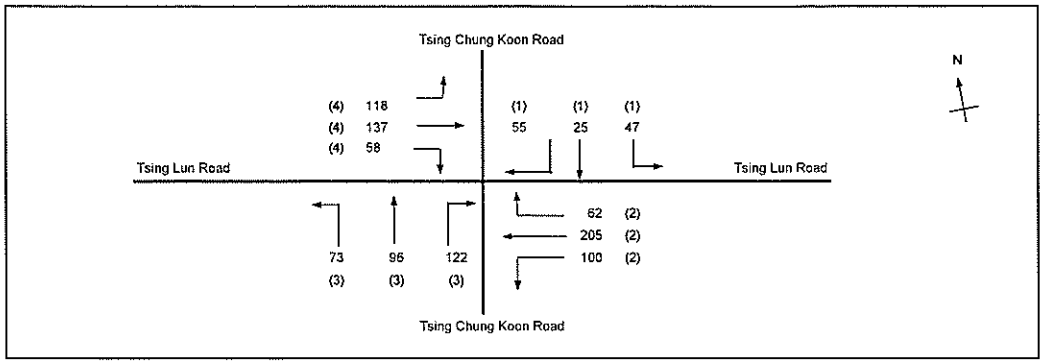


Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

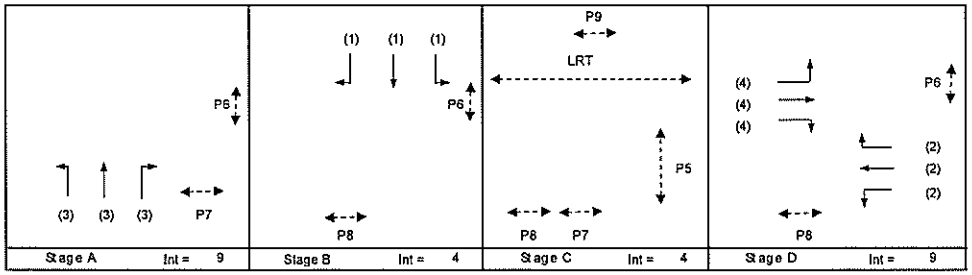
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		221		221	0.00	4030			4030	0.055			9	21	0.133	3	13
RT	A	3.50	1	1	10	O		2105			209	209	1.00	1630	12	100	1730	0.120	0.120		19	21	0.414	12	21
LT	A	3.30	1	1	10		N	1945	75			75	1.00	1691			1691	0.044			7	21	0.162	5	18
SA	A	3.30	1	2	10			4170		367		367	0.00	4170			4170	0.088			14	21	0.202	15	18
LT	B	3.30	2	1	10			2085	198			198	1.00	1813			1813	0.109	0.109		17	15	0.624	18	28
RT	B	3.50	2	1	10			2105			131	131	1.00	1830			1830	0.071			11	15	0.342	12	24
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New	2028 Ref	PROJECT NO.: 81460	Prepared By:	TZ	May-19
J7: Tsing Lun Road / Tsing Chung Koon Road		FILENAME :	Checked By:	MM	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows		J7_Tsing Lun Rd_Tsing Chung Koon Rd_S.x	Reviewed By:	OC	May-19



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	101	sec
Sum(y)		Y =	0.295	
Loss time		L =	39	sec
Total Flow		=	1098	pcu
Co	= (1.5*L+5)/(1-Y)	=	90.0	sec
Cm	= L/(1-Y)	=	55.3	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	106.1	%
Cp	= 0.9*L/(0.9-Y)	=	58.0	sec
Ymax	= 1-L/C	=	0.614	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	87.4	%

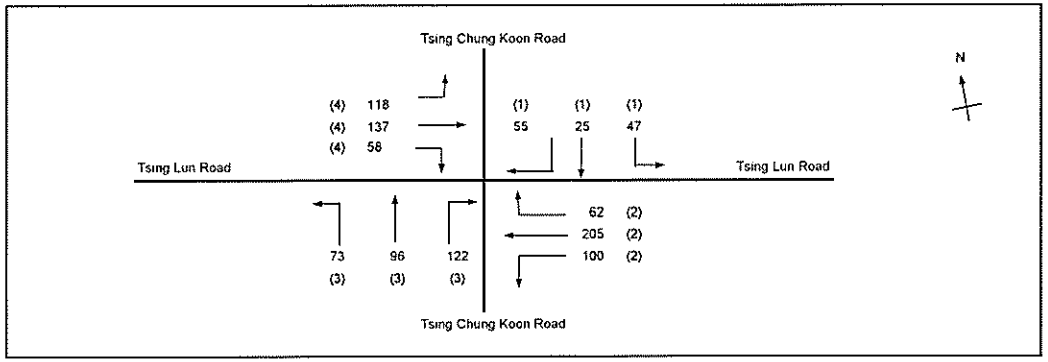


Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	83	3
P7	A,C	5.5	5	5	6	33	5
P8	B,C,D	7.0	5	6	1	61	6
P9	C	7.5	5	6	1	11	6

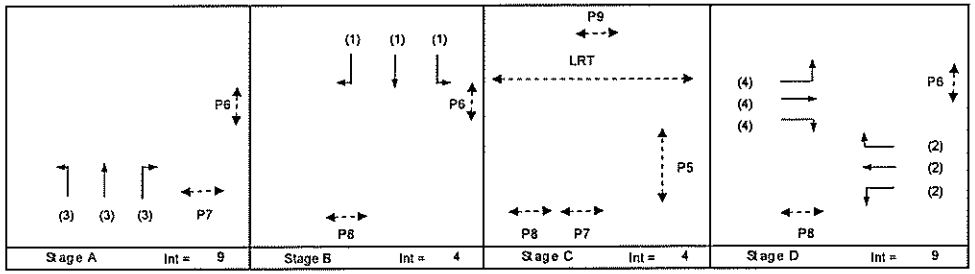
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	73	96		169	0.43	1926			1926	0.087			18	20	0.442	18	35
RT	A	3.70	3	1	18			2125			122	122	1.00	1962			1962	0.062	0.062		13	20	0.314	12	33
LT,SA,RT	B	3.50	1	1	15		N	1965	47	25	55	127	0.80	1819			1819	0.070	0.070		15	16	0.442	18	39
LT,SA	D	3.30	2	1	13		N	1945	100	205		305	0.33	1874			1874	0.163	0.163		34	26	0.532	36	36
RT	D	3.30	2	1	17	O		2085			62	62	1.00	1705	10	59	1764	0.035			7	26	0.137	6	27
LT,SA	D	3.40	4	1	13		N	1955	118	137		254	0.46	1855			1856	0.137			29	26	0.532	30	33
RT	D	3.80	4	1	20	O		2135			58	58	1.00	1772	18	107	1879	0.031			7	26	0.121	6	25
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New	2028 Des	PROJECT NO.: 61460	Prepared By:	TZ	May-19
J7: Tsing Lun Road / Tsing Chung Koon Road		FILENAME :	Checked By:	MM	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows		J7_Tsing Lun Rd_Tsing Chung Koon Rd_S.x	Reviewed By:	OC	May-19



		Existing Cycle Time	
No. of stages per cycle	N =	4	
Cycle time	C =	101	sec
Sum(y)	Y =	0.295	
Loss time	L =	39	sec
Total Flow	=	1098	pcu
Co = (1.5*L+5)/(1-Y)	=	90.0	sec
Cm = L/(1-Y)	=	55.3	sec
Yult	=	0.608	
R.C.ult = (Yult-Y)/Y*100%	=	106.1	%
Cp = 0.9*L/(0.9-Y)	=	58.0	sec
Ymax = 1-L/C	=	0.614	
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	87.4	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	83	3
P7	A,C	5.5	5	5	6	33	5
P8	B,C,D	7.0	5	6	1	61	6
P9	C	7.5	5	6	1	11	6

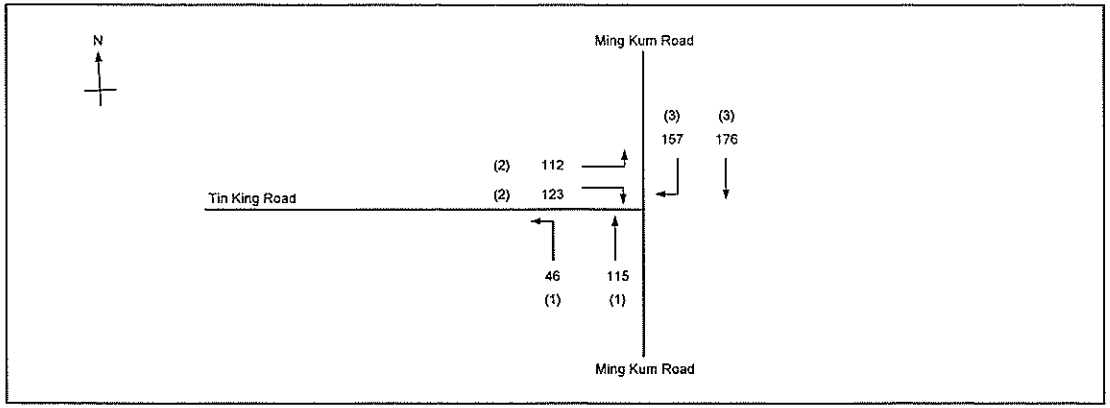
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	73	96		169	0.43	1926			1926	0.087			18	20	0.442	18	35
RT	A	3.70	3	1	18			2125			122	122	1.00	1962			1962	0.062	0.062		13	20	0.314	12	33
LT,SA,RT	B	3.50	1	1	15		N	1965	47	25	55	127	0.80	1819			1819	0.070	0.070		15	15	0.442	18	35
LT,SA	D	3.30	2	1	13		N	1945	100	205		305	0.33	1874			1874	0.163	0.163		34	25	0.632	35	35
RT	D	3.30	2	1	17	O		2085			62	62	1.00	1705	10	59	1764	0.035			7	25	0.137	5	27
LT,SA	D	3.40	4	1	13		N	1955	118	137		254	0.46	1856			1856	0.137			29	25	0.532	30	33
RT	D	3.80	4	1	20	O		2135			58	58	1.00	1772	18	107	1879	0.031			7	25	0.121	5	26
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

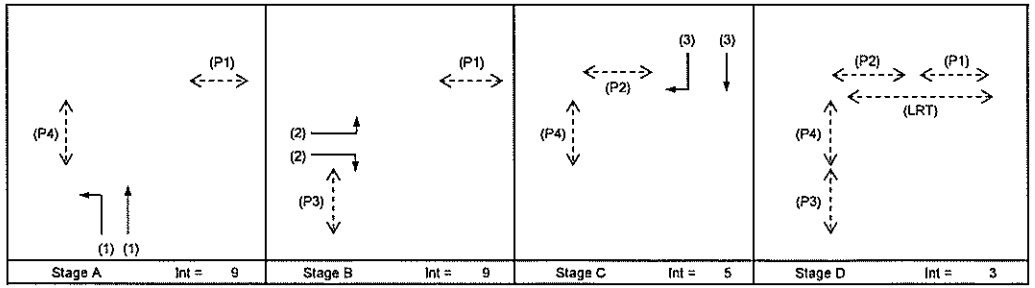
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	PROJECT NO. 81460	Prepared By:	KL	May-19
J8: Tin King Road / Ming Kum Road	**2028 Ref**	Checked By:	MM	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	May-19



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	90 sec
Sum(y)		Y =	0.187
Loss time		L =	43 sec
Total Flow		=	729 pcu
Co	= (1.5*L+5)/(1-Y)	=	85.5 sec
Cm	= L/(1-Y)	=	52.9 sec
Yult		=	0.578
R.C.ult	= (Yult-Y)/Y*100%	=	208.0 %
Cp	= 0.9*L/(0.9-Y)	=	54.3 sec
Ymax	= 1-L/C	=	0.522
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	150.7 %



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		35	6
P2	C	6.8	5	6		21	6
P3	B	4.5	5	4		16	4
P4	A,C	6.8	5	6		36	6

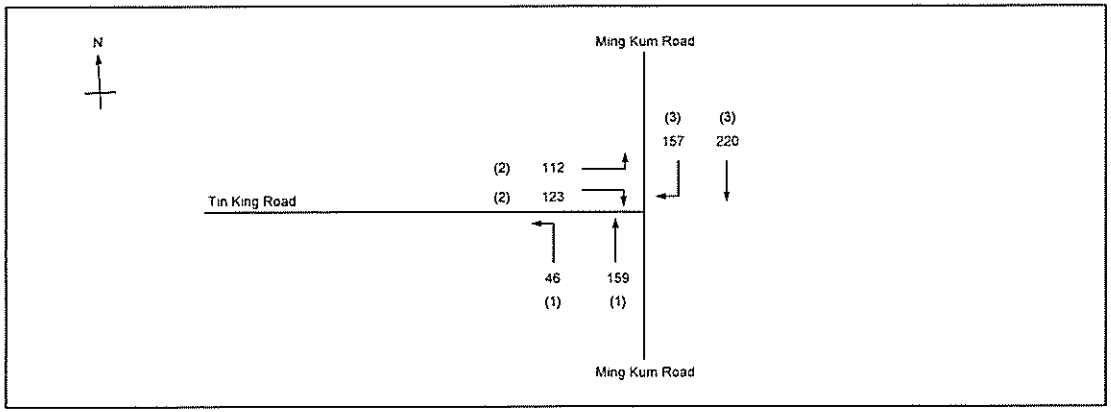
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.40	1	1	18			2095	46	32		78	0.60	1996			1996	0.039			10	11	0.320	5	35
SA	A	3.80	1	1				2135		83		83	0.00	2135			2135	0.039	0.039		10	11	0.320	5	35
LT	B	3.30	2	1	15		N	1945	112			112	1.00	1768			1768	0.063	0.063		16	17	0.335	12	31
RT	B	3.30	2	1	21			2085			123	123	1.00	1946			1946	0.063			16	17	0.335	12	31
SA	C	3.40	3	1			N	1955		166		166	0.00	1955			1955	0.085			21	19	0.403	13	30
SA,RT	C	3.50	3	1	18			2105		9	157	166	0.94	1952			1952	0.085	0.085		21	19	0.403	13	30
LRT	D																			20		20			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

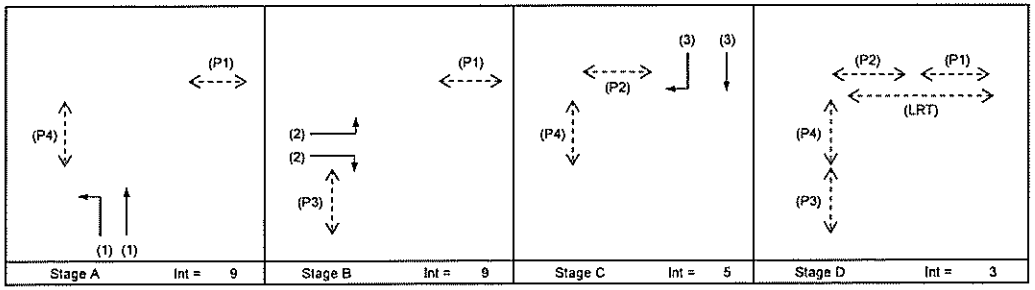
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	PROJECT NO. 81460	Prepared By:	KL	May-19
J8: Tin King Road / Ming Kum Road	**2028 Des**	Checked By:	MM	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	May-19



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	90	sec
Sum(y)		Y =	0.209	
Loss time		L =	43	sec
Total Flow		=	817	pcu
Co	= (1.5*L+5)/(1-Y)	=	87.8	sec
Cm	= L/(1-Y)	=	54.3	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	176.7	%
Cp	= 0.9*L/(0.9-Y)	=	56.0	sec
Ymax	= 1-L/C	=	0.522	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	125.2	%

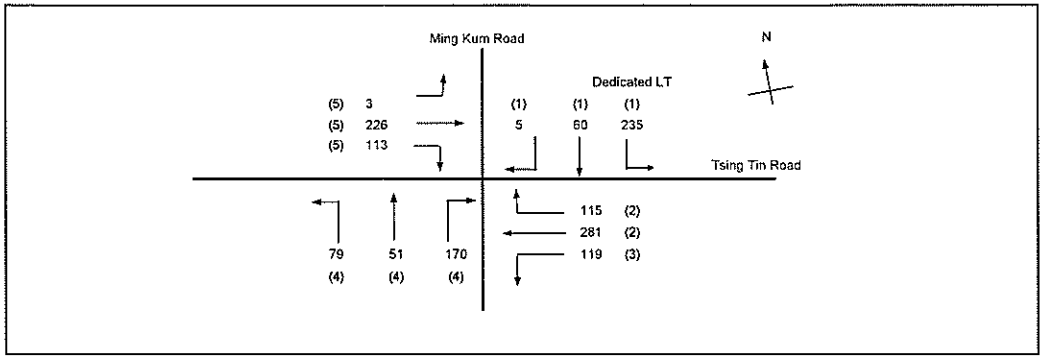


Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		34	6
P2	C	6.8	5	6		22	6
P3	B	4.5	5	4		14	4
P4	A,C	6.8	5	6		38	6

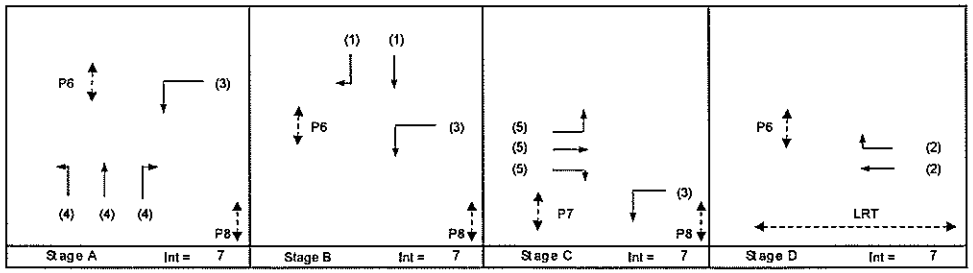
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.40	1	1	18			2095	46	53		100	0.47	2017			2017	0.049			11	11	0.405	12	37
SA	A	3.80	1	1				2135		106		106	0.00	2135			2135	0.049	0.049		11	11	0.405	12	37
LT	B	3.30	2	1	15		N	1945	112			112	1.00	1768			1768	0.063	0.063		14	17	0.335	12	31
RT	B	3.30	2	1	21			2085			123	123	1.00	1946			1946	0.063			14	17	0.335	12	31
SA	C	3.40	3	1			N	1955		188		188	0.00	1955			1955	0.096			22	19	0.454	18	31
SA,RT	C	3.50	3	1	18			2105		32	157	189	0.83	1969			1969	0.096	0.096		22	19	0.454	18	31
LRT	D																			20		20			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	2028 Ref	PROJECT NO.: 61460	Prepared By:	KL	May-19
J9: Tsing Tin Road / Ming Kum Road		FILENAME :	Checked By:	MM	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows		J9_Tsing Tin Road_Ming Kum Road_S.xls	Reviewed By:	OC	May-19



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	145	sec
Sum(y)		Y =	0.273	
Loss time		L =	25	sec
Total Flow		=	1223	pcu
Co	= (1.5*L+5)/(1-Y)	=	58.4	sec
Cm	= L/(1-Y)	=	34.4	sec
Yult		=	0.713	
R.C.ult	= (Yult-Y)/Y*100%	=	161.1	%
Cp	= 0.9*L/(0.9-Y)	=	35.9	sec
Ymax	= 1-L/C	=	0.828	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	173	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		107	8
P7	C	5	5	4	5	12	4
P8	A,B,C	8	5	7		41	7

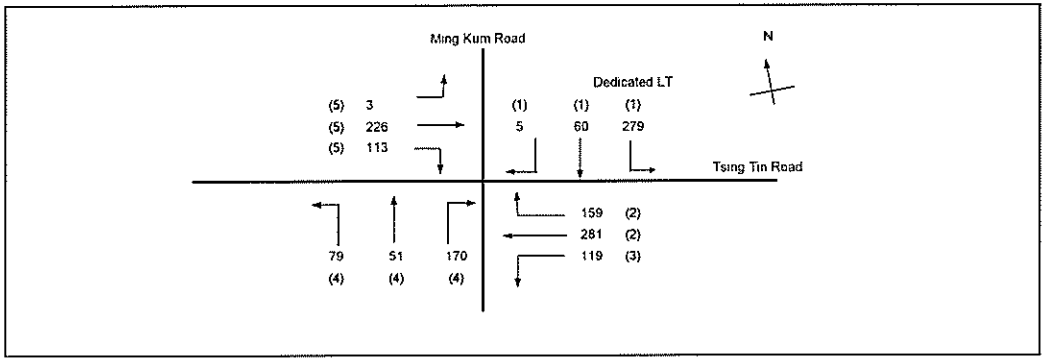
Movement	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				25					
LT	A	3.30	4	1	12		N	1945	79			79	1.00	1729			1729	0.046			20	18	0.470	12	57
SA,RT	A	3.30	4	1	18			2085		51	67	119	0.00	2085			2085	0.057	0.057		25	16	0.458	24	56
RT	A	3.30	4	1	16			2085			103	103	1.65	1805			1805	0.057			25	16	0.458	12	59
LT	A,B,C	3.50	3	1	21		N	1965	119			119	1.00	1834			1834	0.065			28	22	0.451	12	23
SA	B	3.30	1	2			N	4030		60		60	0.00	4030			4030	0.015	0.015		7	14	0.434	6	55
RT	B	3.30	1	1	20			2085			5	5	1.00	1940			1940	0.003			1	14	0.028	0	54
LT,SA	C	3.40	5	1	13		N	1955	3	108		112	0.03	1948			1948	0.057			25	16	0.518	18	63
SA,RT	C	3.40	5	1	15			2095		118	2	120	0.01	2092			2092	0.057	0.057		25	16	0.520	24	62
RT	C	3.40	5	1	18			2095			111	111	1.00	1934			1934	0.057			25	16	0.519	18	63
SA	D	3.40	2	1			N	1955		281		281	0.00	1955			1955	0.144	0.144		63	55	0.502	30	22
RT	D	3.40	2	2	18		N	4050			115	115	1.00	3738			3738	0.031			14	51	0.055	6	19

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

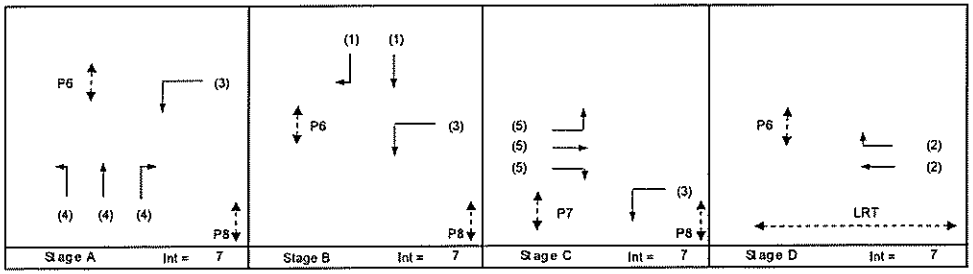
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	2028 Des	PROJECT NO.: 81460	Prepared By:	KL	May-19
J9: Tsing Tin Road / Ming Kum Road		FILENAME :	Checked By:	MM	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows		J9_Tsing Tin Road_Ming Kum Road_S.xls	Reviewed By:	OC	May-19



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	145 sec
Sum(y)		Y =	0.273
Loss time		L =	25 sec
Total Flow		=	1267 pcu
Co	= (1.5*L+5)/(1-Y)	=	58.4 sec
Cm	= L/(1-Y)	=	34.4 sec
Yult		=	0.713
R.C.ult	= (Yult-Y)/Y*100%	=	161.1 %
Cp	= 0.9*L/(0.9-Y)	=	35.9 sec
Ymax	= 1-L/C	=	0.828
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	173 %

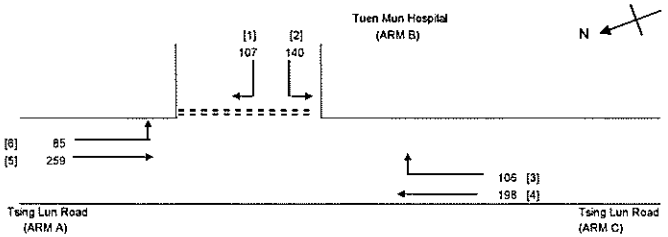


Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		107	8
P7	C	5	5	4	5	12	4
P8	A,B,C	8	5	7		41	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				25					
LT	A	3.30	4	1	12		N	1945	79			79	1.00	1729			1729	0.046			20	14	0.170	12	57
SA,RT	A	3.30	4	1	18			2085		51	67	119	0.00	2085			2085	0.057	0.057		25	18	0.458	24	56
RT	A	3.30	4	1	16			2085			103	103	1.65	1805			1805	0.057			25	18	0.489	18	59
LT	A,B,C	3.50	3	1	21		N	1965	119			119	1.00	1834			1834	0.065			28	52	0.151	12	23
SA	B	3.30	1	2			N	4030		60		60	0.00	4030			4030	0.015	0.015		7	14	0.154	6	55
RT	B	3.30	1	1	20			2085			5	5	1.00	1940			1940	0.003			1	14	0.028	0	54
LT,SA	C	3.40	5	1	13		N	1955	3	108		112	0.03	1948			1948	0.057			25	16	0.519	18	63
SA,RT	C	3.40	5	1	15			2095		118	2	120	0.01	2092			2092	0.057	0.057		25	16	0.520	24	62
RT	C	3.40	5	1	18			2095			111	111	1.00	1934			1934	0.057			25	16	0.519	18	58
SA	D	3.40	2	1			N	1955		281		281	0.00	1955			1955	0.144	0.144		63	63	0.302	30	22
RT	D	3.40	2	2	18		N	4050			159	159	1.00	3738			3738	0.043			19	63	0.049	9	19

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	**2028 Ref**	PROJECT NO.: 61460	PREPARED BY:	TZ	May-19
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	May-19



NOTES (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	9.40	(metres)
W cr	=	0	(metres)
q a-b	=	85	(pcu/hr)
q a-c	=	259	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	6.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	198	(pcu/hr)
q c-b	=	106.08	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	50	(metres)
Vr b-a	=	20	(metres)
Vr b-c	=	20	(metres)
q b-a	=	107	(pcu/hr)
q b-c	=	140	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.08456166
E	=	1.153789
F	=	1.1989238
Y	=	0.6757
F for (Qb-ac)	=	0.567010309

THE CAPACITY OF MOVEMENT :

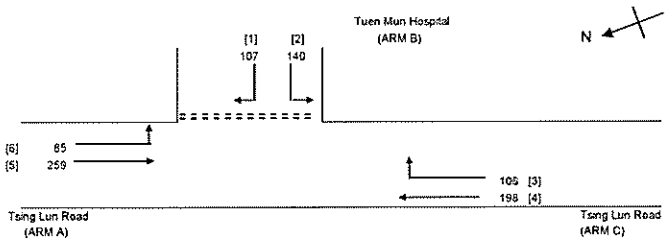
Q b-a	=	528		
Q b-c	=	776	Q b-c (O) =	736.84
Q c-b	=	792		
Q b-ac	=	644.85		
TOTAL FLOW	=	894.9489507	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2019
DFC b-c	=	0.1799
DFC c-b	=	0.1339
DFC b-c (share lane)	=	0.3817

CRITICAL DFC = 0.38

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories	**2028 Des**	PROJECT NO.: 81460	PREPARED BY:	TZ	May-19
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	May-19



NOTES (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	9.40	(metres)
W cr	=	0	(metres)
q a-b	=	65	(pcu/hr)
q a-c	=	259	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	6.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	198	(pcu/hr)
q c-b	=	105.08	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	50	(metres)
Vr b-a	=	20	(metres)
Vr b-c	=	20	(metres)
q b-a	=	107	(pcu/hr)
q b-c	=	140	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.08456166
E	=	1.153789
F	=	1.1989238
Y	=	0.6757
F for (Qb-ac)	=	0.567010309

THE CAPACITY OF MOVEMENT :

Q b-a	=	528		
Q b-c	=	776	Q b-c (O) =	736.84
Q c-b	=	792		
Q b-ac	=	644.85		

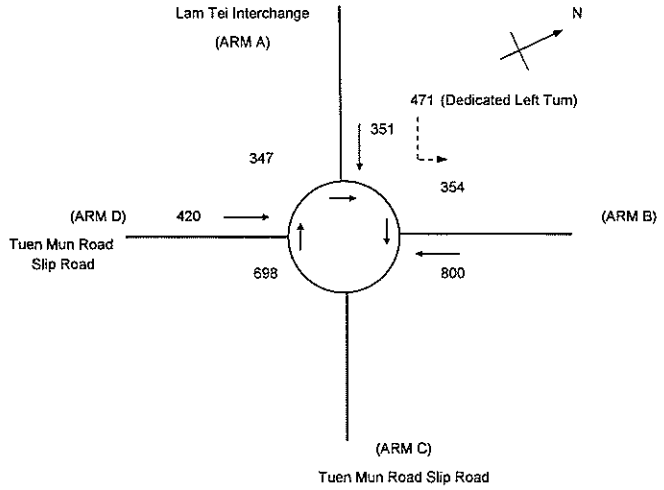
TOTAL FLOW = 894.9489507 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2019
DFC b-c	=	0.1799
DFC c-b	=	0.1339
DFC b-c (share lane)	=	0.3817

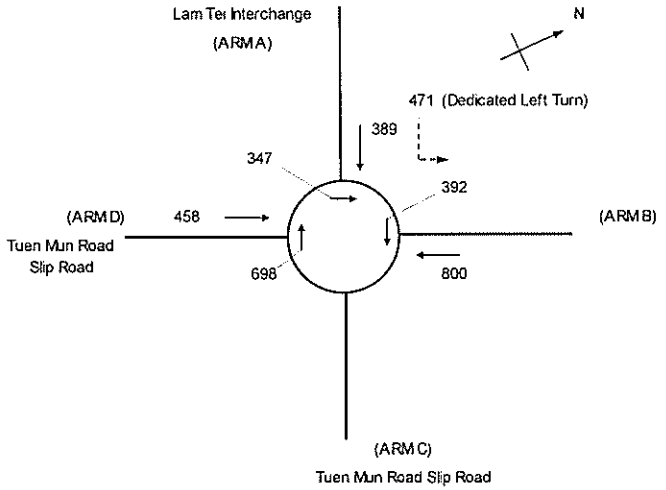
CRITICAL DFC = 0.38

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 61460	PREPARED BY:	KL	May-19
J11 : Lam Tei Interchange	2028 Ref	FILENAME :	CHECKED BY:	MM	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	May-19



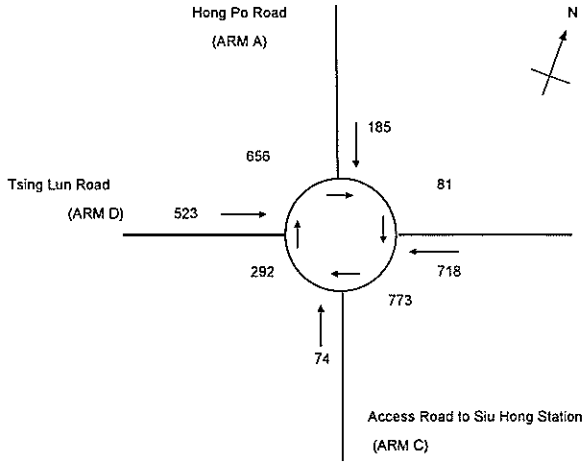
ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	3.0	3.9		3.2			
E	=	Entry width (m)	7.6	10.2		8.0			
L	=	Effective length of flare (m)	10.0	3.0		16.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	89.0	89.0		89.0			
A	=	Entry angle (degree)	30.0	29.0		32.0			
Q	=	Entry flow (pcu/h)	351	800		420			
Qc	=	Circulating flow across entry (pcu/h)	347	354		698			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.74	3.36		0.48			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.02			
X2	=	V + ((E-V)/(1+2S))	4.86	4.72		5.65			
M	=	EXP((D-60)/10)	18	18		18			
F	=	303*X2	1473	1429		1712			
Td	=	1+(0.5/(1+M))	1.03	1.03		1.03			
Fc	=	0.21*Td(1+0.2*X2)	0.42	0.42		0.46			
Qe	=	K(F-Fc*Qc)	1370	1317		1424	Total In Sum =	1571	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.26	0.61		0.30	DFC of Critical Approach =	0.61	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	KL	May-19
J11 : Lam Tei Interchange	2028 Des	FILENAME :	CHECKED BY:	MM	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	May-19



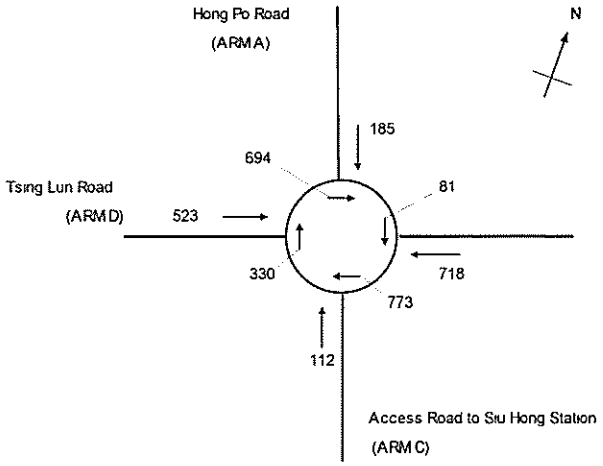
ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	3.0	3.9		3.2			
E	=	Entry width (m)	7.6	10.2		8.0			
L	=	Effective length of flare (m)	10.0	3.0		16.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	89.0	89.0		89.0			
A	=	Entry angle (degree)	30.0	29.0		32.0			
Q	=	Entry flow (pcu/h)	389	800		458			
Qc	=	Circulating flow across entry (pcu/h)	347	392		698			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.74	3.36		0.48			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.02			
X2	=	V + ((E-V)/(1+2S))	4.86	4.72		5.65			
M	=	EXP((D-60)/10)	18	18		18			
F	=	303*X2	1473	1429		1712			
Td	=	1+(0.5/(1+M))	1.03	1.03		1.03			
Fc	=	0.21*Td(1+0.2*X2)	0.42	0.42		0.46			
Qe	=	K(F-Fc*Qc)	1370	1301		1424	Total In Sum =	1647	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.28	0.61		0.32	DFC of Critical Approach =	0.61	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO.: 81460	PREPARED BY:	TZ	May-19
J12 : Tsing Lun Road / Hong Po Road	2028 Ref	FILENAME :	CHECKED BY:	MM	May-19
2028 Chung Yeung Reference Peak Hour Traffic Flows		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	May-19



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	2.8	3.4	3.3	4.2			
E	=	Entry width (m)	9.0	9.5	8.4	7.4			
L	=	Effective length of flare (m)	7.0	10.0	8.0	24.0			
R	=	Entry radius (m)	30.0	12.0	35.0	42.0			
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0			
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0			
Q	=	Entry flow (pcu/h)	185	718.4	74	523			
Qc	=	Circulating flow across entry (pcu/h)	656	80.6	773	292			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.21			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03			
X2	=	V + ((E-V)/(1+2S))	4.42	5.5	4.93	6.44			
M	=	EXP((D-60)/10)	12	12.2	12	12			
F	=	303*X2	1338	1656.3	1495	1952			
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04			
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50			
Qe	=	K(F-Fc*Qc)	1031	1465.6	1104	1853	Total In Sum =	1500	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.18	0.5	0.07	0.28	DFC of Critical Approach =	0.49	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for Tin Kwong Lung Yee Temple with Ancillary Columbarium, Tuen Mun New Territories		PROJECT NO. 81460	PREPARED BY:	TZ	May-19
J12 : Tsing Lun Road / Hong Po Road	2028 Des	FILENAME :	CHECKED BY:	MM	May-19
2028 Chung Yeung Design Peak Hour Traffic Flows		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	May-19



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	2.8	3.4	3.3	4.2			
E	=	Entry width (m)	9.0	9.5	8.4	7.4			
L	=	Effective length of flare (m)	7.0	10.0	8.0	24.0			
R	=	Entry radius (m)	30.0	12.0	35.0	42.0			
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0			
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0			
Q	=	Entry flow (pcu/h)	185	718.4	112	523			
Qc	=	Circulating flow across entry (pcu/h)	694	80.6	773	330			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.21			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03			
X2	=	V + ((E-V)/(1+2S))	4.42	5.5	4.93	6.44			
M	=	EXP((D-60)/10)	12	12.2	12	12			
F	=	303*X2	1338	1656.3	1495	1952			
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04			
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50			
Qe	=	K(F-Fc*Qc)	1016	1465.6	1104	1834	Total In Sum =	1538	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.18	0.5	0.10	0.29	DFC of Critical Approach =	0.49	

Compilation of a Management Plan by Tin Kwong Lun Yee (天罡隆義) Located at Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT to Facilitate the Application of Columbarium (骨灰龕) Licence Under the Private Columbaria Ordinance, Cap 630

Location : Lot Nos. 1744A – C & 1744F - I in D.D. 132, Tuen Mun, NT

Prepared by LEUNG Wing-tai, William
(Associate Traffic Management Consultant of Toco Planning Consultants Ltd)

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Compilation of a Management Plan by Tin Kwong Lun Yee (天罡隆義) Located at Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT to Facilitate the Application of Columbarium (骨灰龕) Licence Under the Private Columbaria Ordinance, Cap 630

Location : Lot Nos. 1744A – C & 1744F - I in D.D. 132, Tuen Mun, NT

1. Introduction

This paper, which comprises the traffic and crowd management plans and a contingency plan is prepared by the aforesaid Traffic Management Consultant on behalf of the Applicant, Miss YIP Yuk-ping, Rita of Tin Kwong Lun Yee (天罡隆義) located at Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT, for facilitating the application of columbarium licence under the Private Columbaria Ordinance (PC Ord), Cap 630.

2. Background

2.1 Tin Kwong Lun Yee (天罡隆義) (hereafter refer to as TKLY) is located at the low-level hill side of Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT, north west of Po Tin Estate, Tuen Mun and it occupies a site area of about 3137 m^2. Its religion is Tibetan Buddhism Vajrayana and it started to operation as a columbarium in 2010 offering niche spaces for columbarium service. The site is large and is built in a rectangular shape stretching from the south to the north along the western hill side of Kwong Shan Tusen. Three isolated 2-storey columbarium blocks (consist of a total of 6 columbarium halls) are built in a row inside the site with the front of the blocks facing east and a large compound is built in front of the columbarium blocks. The site is easily accessible via Ming Kum Road, Hing Kwai Street and Hing Fu Street, Tuen Mun; and an unnamed slip road leading to the main entrance of the site. Hing Fu Street is a secondary 2-way road, which ends with a cul-de-sac roundabout to the north rear of Po Tin Estate. The Ming Kum Road, Hing Kwai Street and Tsun Wen Road located on the east of Po Tin Estate are 2-lane 2-way roads, which are the main distributors in the area. The unnamed concrete slip road between Hing Fu Street cul-de-sac roundabout and TKLY is about 4 m wide and is suitable for vehicle running, e.g. 24 seat bus. Public Transport Interchange is located underneath Po Tin Estate and public transport services are available on the aforesaid 3 roads to serve the residents and developments in the area. Location map is at **Annex 'D'**. TKLY is in the process of making application to the Town Planning Board through Toco Planning Consultants Ltd under Section 12A of the Town Planning Ordinance (TPOrd) for the rezoning of the site from

"GB" to "G/IC" for the establishment of a religious institution and columbarium. The Applicant also employs A&B Architects Ltd to assist her to design the future layout plan of the site where some alterations and constructions will be made in due course to upgrade the facilities inside the site concerned. Columbarium niche spaces are already built in the 3 columbarium blocks and TKLY proposes to make application for a columbarium housing **11094** niche spaces, **8** of which were sold and interred before 2017-06-30 (pre-cut-off time), **928** of which are sold but not yet occupied and **10158** are available for sale.

2.2 If the application under Section 12A for the rezoning of TKLY site and the application of columbarium licence to the PCLB are approved, the Applicant undertakes to implement a series of stringent measures including the implementation of **visit-by-appointment system through E-booking and to provide free shuttle bus services** together with various tight administrative and operational measures to ensure an orderly and smooth worship inside TKLY during either Ching Ming or Chung Yeung Festivals. As the site consists of about **3137** m^2 and the size of the compound is around **1320** m^2, the site can accommodate a substantial large number of worshippers at a particular period of time to facilitate worshipping activities to be carried out inside the site concerned. In any case, when licence is approved in due course, it is expected more niches will be sold and the niche spaces will be fully occupied gradually the latest by the year of 2025 as proposed by the Applicant, and an increase of worshippers to TKLY will occur during subsequent festive seasons. Should this be the case, enhanced strategic traffic and crowd management measures need to be implemented at TKLY and its vicinity to ensure the safe arrival and departure of worshippers and the smooth running of the event(s).

2.3 As far as transport service is concerned, TKLY is easily accessible by private/public transport. There are at least 5 types of transport facilities for visitors to reach TKLY, namely :--

(a) By free shuttle bus services provided by TKLY (circular route) from TKLY to MTR West Rail Siu Hong Stn North PTI to pick up visitors to TKLY & vice versa
(b) By LRT services via Tin King LRT Stop, Tuen Mun & then walk to TKLY;
(c) By bus to the bus stops at or opposite to Po Tin Estate, Ming Kum Road, Tuen Mun & then walk to TKLY;
(d) By bus to the Po Tin PTI, Tuen Mun & then walk to TKLY; &
(e) By GMB to the GMB Stops at Ming Kum Rd o/s Po Tin Estate & then walk to TKLY.

2.4 Visitors resort to driving to TKLY will be advised in advance that no parking facilities except for disabled/elderly will be provided by the site concerned and they can only drop off visitors at Hing Fu Street cul-de-sac roundabout and then walk up the unnamed slip road to reach TKLY.

2.5 A site reconnaissance (Recce) at TKLY and its surrounding areas was conducted on 2019-06-06 by the author. The author took LRT route 615 from Yuen Long MTR LRT Stop to reach Tin King LRT Stop and then walked to TKLY via Ming Kum Road, Hing Kwai Street, Hing Fu Street and the unnamed slip road outside the site concerned. The walking distance was about 15-20 minutes in normal pace. The Applicant, Miss YIP Yuk-ping was met at TKLY site and adequate information concerning the TKLY columbarium was obtained from her.

2.6 TKLY lies on the lower mid-level of Kwong Shan Tsuen and is built in a rectangular shape stretching from south to north along the hill side and is accessible via an unnamed concrete slip road (about 4m wide) linking with the cul-de-sac roundabout of Hing Fu Street, Tuen Mun. The entrance is located on the south east corner of the site concerned and 3 two-storey columbarium blocks are built inside the site (Block 1 on the south side, Block 2 & 3 are located to the north of Block 1 respectively). The columbarium blocks are built with the front of the 3 columbarium blocks facing east whilst at the rear of the columbarium blocks lies another long and wide alley with the retaining wall lies behind it to the west. A large compound is built in front of the columbarium blocks facing east. The columbarium halls are built in tradition columbarium style and in good serviceable condition. There were no incense burners located inside TKLY and the Applicant stated that no burning of any incense materials be allowed inside the site concerned which is one of their house rules that worshippers need to adhere to.

2.7 For escape route, there are adequate space and staircases for worshippers to enter the columbarium halls and leave vice versa. The layout of the columbarium premises do provide adequate escape/dispersal routes for worshippers to disperse in the event of fire or other emergency situations. Fire extinguishers were seen placing at prominent locations at the entrances of the columbarium halls. The Applicant has commissioned Toco Planning Consultants Ltd as her planner and A&B Architects Ltd as her site designer for some renovations and the latter will prepare an updated layout plan of the site to enhance Applicant's application under Section 12A of TPOrd. In future, the site will consist 3 columbarium blocks, 10 parking spaces, 4 shuttle bus parking spaces and other facilities and the management office will be

located on the G/F of columbarium Block 2. Other necessary service rooms will also be available within the columbarium blocks. The newly designed master layout plan of TKLY is at **Annex 'D'**

3. Basic Information of the Columbarium

The basic information of the columbarium concerned is as follows :-

Name of the columbarium : Tin Kwong Lun Yee (天罡隆義)
Address of the columbarium : Tin Kwong Lun Yee, Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT
Year of commencement of operation : 2010
Name of operator : Miss YIP Yuk-ping, Rita
Status of operator : Tin Kwong Lun Yee Limited
Religion of the columbarium : Tibetan Buddhism Vajrayana

4. Site Information and Building Arrangement

This columbarium is composed of :

- 3 columbarium blocks (a total of 6 columbarium halls)(about 285.2 m^2)(holding capacity : 142.6 persons at any one time)
- No joss paper burner
- No refuse storage room(s) – rubbish will be taken to nearby refuse collection point near to Hing Fu Street cul-de-sac for dumping on a daily basis.
- Other buildings which are facilities necessary for or ancillary to the operation of the columbarium (please specify nature and number)

  (a) Female Toilet : 2 (Female/Male share use)
  (b) Male Toilet : (same as above)
  (c) Disabled Toilet : (No)
  (d) Kitchen : (No)
  (e) Office : (1)

- Other facilities necessary for or ancillary to the operation of the columbarium (e.g. parking facilities, loading and unloading facilities) (please specify nature, area and number) 10 parking spaces, which will be suspended for use during festive days except for disabled and elderly on an advance E-booking system. 4 shuttle bus parking spaces for the parking and running of free shuttle bus services during the festive days for the conveyance of worshippers are available.

5. The holding Capacity of Visitors and Admission Control

The Applicant provides the following information :

- Opening hours : 1000 – 1700 hours
- Opening hours during Ching Ming and Chung Yeung festive periods : 0900 – 1800 hours
- Visitors holding capacity of the 3 columbarium blocks: 142.6 persons at any one time
- Measures to be adopted to ensure that the number of visitors inside the columbarium will not exceed the holding capacity for visitors : the Applicant undertakes to implement a straight **visit-by-appointment system** in future operations (this system will apply to the 2 consecutive weekends before & after the main day together with the main day of either Ching Ming or Chung Yeung Festivals, i.e. **a total of 9 days** to evenly distribute the number of worshippers going to TKLY by pre-arranged appointment) to ensure that only a controllable number of worshippers are allowed to access TKLY for worship, hence the holding capacity of the columbarium concerned will not be exceeded and a safe worship situation is provided, in particular during the peak hours of the main day of either Ching Ming or Chung Yeung Festivals. In addition, free shuttle bus services will be provided to convey visitors to and from TKLY. Details of the aforesaid arrangements are highlighted in subsequent paragraphs.
- Sale agreement and house rule concerning admission control : there is no mention of **admission control** in the sale agreement previously in use, yet such clause will be incorporated in future sale agreement(s) for the compliance of niche buyers. Moreover, the Applicant will set up house rules concerning admission control over worshippers and will inform the niche purchasers about the house rules concerned well in advance prior to Ching Ming and Chung Yeung Festivals. Future sale agreements will be processed through registered solicitor firm and the clause concerned will include the following rules, namely :-
  - (i) Niche purchasers are obliged to adhere to the visit-by-appointment system through E-booking & the admission control to be implemented by TKLY;
  - (ii) No parking facilities will be provided by TKLY except for disabled & elderly with advance visit-by-appointment system through E-booking;
  - (iii) Niche purchasers and his/her accompanying visitors will be assigned and agreed to resort to the use of free shuttle bus services provided by TKLY through visit-by-appointment system by way of E-booking;
  - (iv) Niche purchasers and his/her accompanying visitors need to adhere to the house rules of TKLY for the worship;
  - (v) A notice in Chinese & English will be given to the niche purchasers during the course of signing the sale agreements with the agreed clause and house rules appended on them so that niche purchasers are properly notified about the aforesaid rules; &

(vi) TKLY has the right to deny access if niche purchasers & the accompanying visitors fail to adhere to the clause and house rules concerned.

6. Columbarium Site Area, Holding Capacity, Calculation of Visitors' Attendance & Free Shuttle Bus Services

6.1 TKLY site area = about 3137 m^2
By adopting the BD's CoP the calculation of columbarium factor of 2 m^2 per person, the site concerned in theory can hold up a maximum of :-
3137 m^2 ÷ 2 m^2 = **1569 persons at any one time**

TKLY compound area = about 1320 m^2
Holding capacity of the compound : 1320 m^2 ÷ 2 m^2 = **660 persons at any one time**

The 6 columbarium halls have an area of 285.2 m^2.
Holding capacity = **142.6** persons at any one time.

Visitors attendance : the Applicant will implement the visit-by-appointment system (VBAS) **by way of free shuttle bus services** for the festival main day & 2 weekends before & after the festival main day, i.e. a total of 9 days where the VBAS will be implemented. During Ching Ming or Chung Yeung Festivals the operation hours of TKLY will be bet. **0900 hrs & 1800hrs** daily (9 hrs/day).

Assuming by the year of 2025 the niche spaces of TKLY will be fully occupied and interred, i.e. a total of 11094 niche spaces (ns) occupied. The average niche spaces' visitors are assumed to be 4 visitors per niche. By calculation the daily visitors' attendance amount the 9 days period in average is :-

11094 ns x 4 visitors/ns ÷ 9 days = 4931 visitors/day
4931 visitors ÷ 9 hrs = **548 visitors/hr**
That is to say the 548 visitors/hr is within the holding capacity of the compound of TKLY (660 visitors at any one time).
Remark : The Applicant undertakes to extend the 9-day period to 13-day period in order to diffuse the attendance of visitors/day/hr, if situation dictates.

6.2 In 2018 Ozzo Technology (HK) Ltd was commissioned by the Applicant to conduct a Traffic Impact Assessment for TKLY. To estimate and evaluate the number of forecast worshippers going to TKLY for worship during the **main day of Ching Ming Festival**, reference was made to the daily

person trip observed at a private columbarium development at To Fung Shan in Tai Wai during 2018 Ching Ming Festival by Ozzo. The site layout of this columbarium is similar to TKLY which is situated on a hilly terrain. During Ching Ming and Chung Yeung Festivals, free shuttle bus services between MTR Tai Wai Station and the columbarium site are provided over the operation hours between 0800hrs – 1700hrs (9 hrs) **based on an appointment system**. Visitors are required to make an appointment in advance and reserve a place for the shuttle bus services prior to their visit to the columbarium during peak grave sweeping festival days.

6.3 The referenced columbarium consist of 3000 niches and the observed daily visitor flows (person/day) & the forecast daily visitor flows of TKLY are appended below :-

Observation	Shuttle Bus		Car/Taxi		Total	
	In-flows	Out-flows	In	Out	In	Out
Observed Daily Visitor In-flows (persons/day) at the surveyed columbarium (Festival Main Day)	1467	1493	41	2	**1508**	**1495**
TKLY with 11094 niches by 2025						
Forecast Daily Visitor In-flows (persons/day) at TKLY (Festival Main Day)					**5577**	**5529**

6.4 By the above survey, it indicates that a daily demand of around **5577** visitors are anticipated going to TKLY during the Ching Ming Festival main day, i.e. an average of 620 visitors/hr between 0800 hrs – 1700 hrs, a period of 9 hrs. An hourly limit of **620** visitors will be assigned, i.e. a total of **5580 visitors per day.**

Formula : 1508 visitors x 11094 ns ÷ 3000 ns = 5577 visitors/day
(i.e. 5577 visitors/day ÷ 9hrs = 620 visitors/hr)

This calculated number of 620 visitors/hr is about the same calculated number of 548 visitors/hr as mentioned in para. 6.1 and both are within the holding capacity (660 persons at any one time) of the compound of TKLY.

6.5 As per the above figure calculated by Ozzo, around 97.3% of the daily person trips use the free shuttle bus services for arriving/departing the surveyed columbarium in Tai Wai during Ching Ming Festival main day. Out of the remaining 2.7% of daily trips, only one car trip was recorded and all others are taxi trips, which indicated that majority of the worshippers resorted to the use of free shuttle bus services through advance booking.

6.6 In this application, the Applicant also proposes to provide free shuttle bus services to convey worshippers to & from TKLY for worship and the shuttle bus services will also cover **9 days**, which span across the Festival period, i.e. the main day plus 2 consecutive weekends before and after the main day. In the Traffic Impact Assessment prepared by Ozzo the following modal splits for visitors accessing TKLY are assumed :-

Mode	**Percent**
Shuttle Bus	95%
Car/Taxi	3%
Public transport/walk	2%
Total	100%

6.7 Based on the assumed model splits, the amount of visitors going to TKLY by different modes are highlighted in the following Table :-

Mode	Visitor In-flows/hr	Veh In-flows(trips)/hr	Visitor Out-flows/hr	Veh Out-flows(trips)/hr
Shuttle Bus	590 (620 visitors x 95% ÷ 100%)	25 (590 visitors ÷ 24 seat shuttle bus)	590	25
Car/Taxi	21	6	21	6
Public Transport/Walk	13	-	13	-
Total	**624**	**31**	**624**	**31**

Note : The shuttle bus trip is based on the 24-seat shuttle bus services
The car/taxi occupancy is based on average occupancy of 3.5 persons per vehicle.

The **624** visitor in-flows does not exceed the holding capacity of the TKLY compound (**660** visitors at any one time)

6.8 The shuttle bus services will be provided by TKLY to convey worshippers from MTR West Rail Siu Hong Station North PTI to TKLY site and vice versa. The intended shuttle bus routes, the distance between TKLY & MTR West Rail Siu Hong Station North PTI, the journey time, vehicle trips; and pick up and set down locations are highlighted below :-

(i) Routeing (circular) : Shuttle bus parking bay i/s TKLY > unnamed concrete footpath o/s TKLY > Hing Fu St roundabout > Hing Fu St > Hing Kwai St > Ming Kum Rd > Tsing Tin Rd > Tuen Mun Rd > Lam Tei Interchange > Siu Hong Stn North PTI general layby > Lam Tei Interchange > Tuen Mun Rd > Tsing Tin Rd > Ming Kum Rd > Hing Kwai St > Hing Fu St > Hing Fu St roundabout > Unnamed concrete footpath o/s TKLY > shuttle bus parking bay i/s TKLY.

(ii) Distance : From TKLY to MTR Siu Hong Stn North PTI = **4km**
From MTR Siu Hong Stn North PTI to TKLY = **4.6km**

(iii) Journey time : From TK LY to MTR Siu Hong Stn North PTI
4km ÷ 50km/hr x 60 min = 4.8 min
From MTR Siu Hong Stn North PTI to TKLY
4.6km ÷ 50km/hr x 60 min = 5.5 min
Circular trip = 10.3 min (hence, each trip will be around 15 minutes including pick up/set down of visitors)

(iv) Accordingly 1 shuttle bus can run 4 circular trips w/i one hour bet. TKLY & MTR West Rail Siu Hong Stn North PTI, hence TKLY needs to provide **6 - 7 shuttle buses** in order to run the 25 trips/hour for the conveyance of 590 visitors/hr to TKLY for worship.
Formula : 60 min ÷ 15 min = 4 trips/hr
24-seat bus x 4 trips/hr = 96 visitors/hr (1 shuttle bus)
96 visitors x 7 vehs. = 672 visitors/hr

(v) Pick up/set down locations : (a) At the shuttle bus parking bay i/s TKLY
(b) At the general layby at MTR West Rail Siu Hong Stn North PTI (sketch at **Annex 'D'**)

7. Traffic and Public Transport Arrangement

TKLY is accessible via Ming Kum Street, Hing Kwai Street, Hing Fu Street and an unnamed concrete slip road linking with the Hing Fu Street cul-de-sac roundabout by the north west side of Po Tin Estate, Tuen Mun. During festive days worshippers resort to the use of public transport can take LRT to Tin King LRT Stop or buses/GMBs to Ming Kum Street o/s Po Tin Estate and then walk to TKLY through the aforesaid roads. The walking distance from these locations to TKLY is about 15 - 20 minutes.

7.1 Bus Routes : 58M, 58P, 58X, 258D, 258S, 258X, 260X, 960, 960A 960B, 960X & 961P

Green Mini-Bus Routes : 40, 44A, 44A1 & 44B

LRT Routes : 505, 507, 615 & 615P

7.2 The routes available to access TKLY are :-

1st route : Take the free shuttle buses provided by TKLY via advance E-booking
Routeing (circular) : Shuttle bus parking bay i/s TKLY > unnamed concrete footpath o/s TKLY > Hing Fu St roundabout > Hing Fu St > Hing Kwai St > Ming Kum Rd > Tsing Tin Rd > Tuen Mun Rd > Lam Tei Interchange > Siu Hong Stn North PTI general layby > Lam Tei Interchange > Tuen Mun Rd > Tsing Tin Rd > Ming Kum Rd > Hing Kwai St > Hing Fu St > Hing Fu St roundabout > Unnamed concrete footpath o/s TKLY > shuttle bus parking bay i/s TKLY.

2nd route : MTR (MTR Yuen Long Stn Exit 'G') >
LRT Route 615 at MTR Yuen Long LRT Stop >
LRT Route 615 stop at LRT Tin King Stop>
Walk along Ming Kum Rd western pavement towards north >
Walk along Hing Kwai St western pavement towards north >
Turn left onto the southern pavement of Hing Fu St & walk towards west to the Hing Fu St cul-de-sac roundabout >
Go up the unnamed concrete footpath linking with Hing Fu St cul-de-sac roundabout to reach TKLY

3rd route : By buses/GMBs to Po Tin PTI/bus stops on Ming Kum Rd o/s Po Tin Estate >
Walk along the aforesaid roads all the way to TKLY

7.3 A copy of the bus routes, green mini-bus routes & LRT routes is at **Annex 'A'**.

8. Special Traffic Arrangement for Tin Kwong Lun Yee, Tuen Mun

8.1 To minimize traffic impact at Ming Kum Road, Hing Kwai Street and Hing Fu Street, the Applicant will evenly distribute and arrange worshippers to visit TKLY for worship over the 9 days period, which span across either Ching Ming or Chung Yeung Festivals period (i.e. 2 consecutive weekends before & after the festive main day plus the main day) so that an orderly and smooth worship can take place at TKLY without causing any severe traffic disruption in the vicinity of Po Tin Estate and its nearby road network. In addition, the Applicant will provide free circular shuttle bus services to convey worshippers from MTR West Rail Siu Hong Station North PTI to TKLY for worship and vice versa so that disruption to traffic is kept to the minimal. A series of measures will be implemented by TKLY as follows :-

(i) A **visit-by-appointment system** will be used whereby visitors will be arranged to reserve a place for the shuttle bus in order to come to TKLY according to a pre-arranged time slot so that a balanced control of visitors can be achieved. Worshippers will be contacted in advance by way of email/SMS/Whatsapp/phone about this pre-arranged time slot arrangement & the use of free shuttle bus services. Entry permits will be sent to respective niche purchasers via mail/email/Whatsapp for identifying their validity to use the free shuttle bus services and entry to TKLY for worship according to the pre-arranged date and time slot;

(ii) TKLY will elongate the opening hours of the site on festival days in order to diffuse worshippers;

(iii) A new clause as per paragraph 5 bullet point 5 will be included in the future usage agreements for the columbarium niches to comply with that no parking facilities be available for worshippers except for disabled/elderly and they are required to reserve the shuttle bus services provided by TKLY to arrive and depart the site concerned. The minority that do not use the free shuttle bus services are encouraged to use public transport services. Worshippers also need to adhere to the admission control that may be implemented by TKLY on site and the house rules. Worshippers will be notified in advance prior to festive days that they need to adhere to the specifications written on the purchase agreements regarding the above and TKLY has the authority to deny access;

(iv) In addition, notices, emails and advertisements will be posed to inform public about the special traffic arrangements;

(v) TKLY will also put up directional signs at various key locations such as the pavement o/s LTR Tin King Stop, Po Tin PTI, Bus/GMB Stops at Ming Kum Road, the pavement of Hing Kwai Street and Hing Fu Street, Hing Fu Street cul-de-sac roundabout and the unnamed concrete slip road leading to the site to guide worshippers to the columbarium; &

(vi) TKLY will also deploy sufficient staff and security guards at the Hing Fu Street cul-de-sac roundabout to guide and assist worshippers to alight from cars or taxis and then guide them to go up the unnamed concrete slip road to reach TKLY. Drivers of driven cars will be reminded on the spot not to park their cars illegally on Hing Fu Street so as to avoid causing traffic disruption.

8.2 Apart from implementing the shuttle bus services and the visit-by-appointment system, TKLY will also implement **admission control system** at its compound where staff and security guards will be deployed thereat to implement the system, in particular during the peak hours of the main day so that only a controllable number of worshippers can be released to go inside the columbarium halls for worship in according to the holding capacity of the columbarium halls. The following will be introduced, namely :-

(i) An admission control by way of **tidal flow system** using ropes or tapes to control/release the worshippers to access the columbarium halls at the 3 blocks will be adopted at the compound inside TKLY where a **holding area** will be set up thereat to allow worshippers to line up waiting to be released into the respective columbarium halls for worship; &

(ii) TKLY staff and security personnel deployed thereat will maintain close communication with the Command Post of TKLY to ensure a staggered/periodical release of worshippers to enter the columbarium halls for worship.

9. Police Presence

With the straight implementation of shuttle bus services provided by TKLY coupled with the visit-by-appointment system, admission control and various administrative and operational measures, it is anticipated that the worship at TKLY during festive days shall be a self-regulated event without the need of Police participation or intervention. In any case and as a matter of courtesy, the Applicant will inform Tuen Mun Police in advance prior to the commencement of festive seasons the expected numbers of attendance to TKLY during each day of the festive period so that Police can at their own disposal make suitable arrangement, if they deed necessary. Useful telephone contacts is at **Annex 'E'**.

10. Crowd Management Plan Execution

10.1 During the worshipping festivals a substantial number of worshippers will go to TKLY, Tuen Mun for worship, in particular when all the niches are sold and interred in future. In this scenario, it is expected that an increase in the number of worshippers will occur at TKLY during the festive period of Ching Ming/Chung Yeung Festivals and a special crowd management plan is considered necessary to be implemented inside TKLY and its nearby area to ensure the safety of worshippers and the smooth worshipping operation inside the columbarium concerned. In the long term, there might be a gradual decrease in the number of worshippers going to TKLY for worship during festive days, yet the introduction of the aforesaid special crowd management plan should not be neglected on each occasion.

10.2 In addition to the administrative measures that will be implemented by the Applicant as stipulated in this management plan and to ensure a safe and orderly worship inside TKLY, a crowd management plan will be introduced by TKLY to control only a controllable number of worshippers enter the columbarium halls for worship in a safe and orderly fashion. The management of TKLY will supervise the operation in the following manner, namely :-

(i) Firstly, TKLY management will implement the **visit-by-appointment system** through E-booking, i.e. by way of phone/email/SMS/ Whatsapp & newsletters. Staff of TKLY will contact the niche purchasers and inform them with the following information for processing the booking, namely :-

(a) The 9 days period that span across the festive period, i.e. the main day & the 2 consecutive weekends before & after the main day which the niche purchasers can book a day & a specific time for worship within these 9 days;

(b) Ask the niche purchasers to provide the exact number of visitors including the number of accompanying visitors;

(c) Ask them to reserve places for the free shuttle bus services & remind them to adhere to the clause and condition in the sale agreement to resort to the use of shuttle bus service and then arrange booking for them;

(d) Inform them the pick-up point, which will be at the general layby of the MTR West Rail Siu Hong Station North PTI where TKLY staff & security guards will be available at the layby to check their validity before allowing them to get on board the shuttle bus & that shuttle bus will also be available at TKLY site to convey them back to Siu Hong Station PTI for dispersal after

the worship;

(e) A pre-arranged day & time slot will be allocated to each of the niche purchasers & his/her visitors through E-booking (the time slot for the worship i/s TKLY columbarium halls will normally not more than 30 minutes); &

(f) Entry permits with the date & time slot chosen printed on them will be mailed/emailed/Whatsapp to the niche purchasers & the latter has to present the entry permits to staff/security guards stationed at Siu Hong Stn North PTI general layby for checking before they are allowed to take the free shuttle bus services to TKLY; &

(g) Niche purchasers will be informed that TKLY will keep record for the aforesaid visit-by-appointment for ad hoc checking, if necessary and if niche purchasers & visitors fail to comply with the arranged appointment, unless with excusable reason(s), TKLY has the right to deny access;

(h) For disabled/elderly driven cars, the niche purchasers need to book in advance with TKLY for using the car parking spaces (each parking not more than 30 minutes) & TKLY will issue car park labels to niche purchasers either by mail/email/Whatsapp so as to identify their authenticity on site. Niche purchasers need to present the car park labels to staff/security guards deployed for traffic/crowd management at the foot of the concrete slip road/Hing Fu Street cul-de-sac R/A for checking before they are allowed to enter TKLY site; &

(i) Only vehicles carrying disabled/elderly with the issued car park labels will be allowed to access the unnamed slip road heading for TKLY, other visitors arrive by cars need to stop at the roundabout for drop-off and the visitors will then be guided to walk up the unnamed concrete slip road heading for TKLY. Appropriate directional sign with suitable notice attached indicating the aforesaid arrangement will be placed at the aforesaid roundabout/unnamed concrete slip road leading to TKLY to alert/remind visitors.

(ii) Secondly, TKLY will introduce **admission control** over in-coming visitors, including visitors using the free shuttle bus services and those on foot to enter TKLY. A **holding area** will be set up at the large compound in front of the columbarium blocks to hold up the in-coming worshippers. After debus from the shuttle buses at the shuttle bus bay inside TKLY and/or those enter TKLY via the main entrance on foot, they will be guided by staff/ security guards to enter the holding area where they will be arranged to line up in 3

rows, 1 row for 1 columbarium block, and then the worshippers will be released periodically to enter the respective columbarium blocks for worship by way of **tidal flow system** in an orderly and staggered manner depending on the number of worshippers inside the 3 columbarium blocks so that no overflown of visitors inside the columbarium halls will occur. Staff/security guards will be deployed at the holding area to monitor/supervise the release of visitors. Again, staff/security guards will be deployed inside the columbarium halls and outside the 3 columbarium blocks respectively to monitor/supervise the in-flow /out-flow of worshippers. They will use walkie talkie for communication in order to ensure an orderly release of worshippers.

(iii) Worshippers finished the worship on the 1/F of the 3 columbarium blocks and the G/F of columbarium Block 3 will be guided to use the rear exits and ramps to go down to the wide alley behind the 3 columbarium blocks to move south towards the departure area immediately behind the shuttle bus bay where they will be arranged by staff/security guards to wait thereat waiting to get on board shuttle bus to depart TKLY. The leaving worshippers from G/F of the 3 columbarium blocks will be guided by staff/security guards at the compound to head south for the aforesaid departure area waiting for taking the shuttle buses. This arrangement will ensure no conflict between arriving and departing visitors so as to ensure an orderly arrival and departure of worshippers.

(iv) TKLY staff/security guards will be deployed at the main entrance, the holding area, the shuttle bus bay, the departure area behind the shuttle bus bay, the open area in front of the car parking spaces, inside and outside the columbarium blocks and the Hing Fu Street cul-de-sac roundabout to monitor the arrival/departure of worshippers;

(v) Plastic barriers, cones and tapes will be placed at the compound to delineate the holding area, the P/C drop-off area & the arrival/departure routes so that no conflict will occur between waiting worshippers and the arriving/departing disabled/elderly driven cars and the arrival/departure crowd;

(vi) Ad hoc worshippers coming to TKLY for worship without advance E-booking and/or late comers will be told and arranged to wait at the holding area awaiting their turns to enter the respective columbarium halls for worship as priority will be given to those with E-booking;

(vii) Notice attached on directional sign erected at the holding area will inform ad hoc visitors/late comers about the arrangement as stated in item (vi) above;

(viii) Directional signs will be placed inside all columbarium halls to indicate clearly to worshippers the exits of the respective columbarium halls where worshippers can disperse through these exits in a safe and orderly manner;&

(ix) The Applicant will try her very best to arrange the visits to the columbarium by way of visit-by-appointment system to prevent overflown situation to occur at TKLY. Should there be any over-spilling of visitors at TKLY, in particular during the peak hour, visitors will be arranged to line up in single file along the unnamed concrete slip road leading to TKLY waiting to be released into TKLY for worship. Sufficient staff/security guards will be deployed along the access road to monitor/supervise the arriving and departing visitors and to use 'Stop & Go' method to regulate the incoming/outgoing visitors and the incoming/outgoing shuttle bus services so that there will not be any conflict between crowd and vehicles movement and to ensure the safety of all.

10.3 The Applicant and her manager of TKLY should be vigilant for this kind of situation and maintain close liaison with staff/security guards deployed at different key locations inside/outside TKLY for the implementation of the aforesaid arrangement(s). Staff/security guards deployed at the **holding area** will explain to the worshippers the reason for making the tidal flow releasing method in order to ensure a safe and orderly release of people into the respective columbarium blocks periodically. Directional sign with notice specifying the holding area and tidal flow system will also be placed at the compound to notify the worshippers. **Moreover, the Applicant will ensure that visitors be informed well in advance before the commencement of the festive days the possibilities of executing tidal flow system on site for special crowd management during the main day of either Ching Ming Festival or Chung Yeung Festival.**

10.4 All staff/security guards will be equipped with walkie talkie for internal communication.

10.5 Should emergency vehicles, such as ambulance(s), need to access TKLY to deal with any emergency situation concerning worshippers, e.g. sick person case(s), the Command Post will inform staff/security guards deployed within the area about approaching emergency vehicles and if necessary temporarily stopped the tidal flow system, the shuttle bus services, other car movement and help to retreat visitors to the roadside on the unnamed concrete slip road leading to TKLY to facilitate passage of emergency vehicles and offer assistance to emergency services personnel.

10.6 The Applicant will arrange clear directional signs be placed at suitable locations inside TKLY to guide the arrival and departure worshippers. Directional signs will also be placed at the following locations to guide visitors to access TKLY, namely :-

(i) Pavement o/s Tin King LRT Stop;
(ii) Western pavement of Ming Kum Road o/s Po Tin PTI and the bus/GMB Stops on Ming Kum Road o/s Po Tin Estate;
(iii) Hing Kwai Street western pavement towards Hing Fu Street;
(iv) Western Pavement of Hing Kwai Street/Hing Fu Street; &
(v) Hing Fu Street cul-de-sac roundabout.

11. Supply & Distribution of Manpower of Tin Kwong Lun Yee Staff/Security Guards for Both Traffic and Crowd Management

As per **Annex 'B'.**

12. Specific Duties of Tin Kwong Lun Yee Staff/Security Guards for Both Traffic & Crowd Management

As per **Annex 'C'**

13. Security Management

The Applicant undertakes to ensure that sufficient security measures are implemented for TKLY. Aerial overhead surveillance cameras will be installed at the main entrance, mounted on the wall of the 3 columbarium blocks and adequate CCTV cameras will also be installed at vantage locations within TKLY to cover the whole site including the columbarium halls so as to monitor the activities within the site and the CCTV monitor panel with 24 hours recording function will be placed inside the Admin Office, G/F of columbarium block 2 which will be manned by TKLY staff during office hours, in particular during the 9 days period including the main day of either Ching Ming or Chung Yeung Festivals. TKLY closes for business at 1700 hours daily and the 24 hours CCTV with recording system will continue to be turned on to monitor/record activities inside it. The whole perimeter of TKLY is bounded by wall and retaining wall and the Applicant will employ 2 night shift security guards to perform 12 hours night shift duties inside TKLY to prevent trespassing and ensure tight security.

14. Inclement Weather

In the event of inclement weather, such as heavy rain, during the course of the operation, TKLY will ensure that those worshippers remain inside TKLY to avoid the rain are remained in safe locations and those queue up at the holding area will retreat to indoor to avoid the rain and the tidal flow system, if implemented, will cease.

15. Command Post (CP)(指揮中心)

The Applicant and her manager will operate a CP in the Admin Office, G/F of columbarium block 2. It will be commanded by the Applicant and her manager or the senior staff in their absence during the festive days.

16. Location Map of Tin Kwong Lun Yee and Route Map

The location map of TKLY and route map are at **Annex 'D'**.

17. Pictures of Tin Kwong Lun Yee, its Columbarium Halls and Emergency Evacuation Routes

As per **Annex 'F'.**

18. Manpower Deployment

18.1 TKLY private columbarium will employ a manager and sufficient staff to manage the site, in particular for the festive operation(s).

18.2 The Applicant will direct the manager to provide sufficient manpower to meet the daily operational need of TKLY and staff will be deployed on a rotation basis, including daily cleaning, overall administration for the site, provide customer service and guiding to visitors, employ professionals and workers for repair and maintenance of TKLY facilities and buildings. Provide fire safety and security measures for the whole site. First-aid box is available at the Admin Office in case of need. Provide traffic/crowd management measures during Ching Ming and Chung Yeung Festivals. **Manpower deployment and responsibilities of staff and security personnel in details for Ching Ming and Chung Yeung Festivals are at Annex 'B' & 'C'.**

18.3 The Applicant undertakes to provide the following information to the Licensing Board/relevant authorities, namely :-

- Organization chart of future TKLY working personnel, their number, ranking and job charters, area of responsibilities in relation to the columbarium and other ancillary facilities.
- The details of future employed manager.
- To provide fire prevention measures training to staff of TKLY in future, such as to arrange staff to attend first-aid courses provided by Auxiliary Medical Service (AMS) (醫療輔助隊) or to employ AMS personnel to station inside TKLY in order to provide medical services to worshippers during Ching Ming and Chung Yeung Festivals.

- Normally, no repair and maintenance work will be carried out during Ching Ming or Chung Yeung Festival but the Applicant undertakes to employ professionals and workers to standby inside TKLY and to undertake urgent repair and maintenance work during the peak grave sweeping days if there is such an impending need.
- In the future management of TKLY, the management mode will be as follows :-
  (i) Staff will be assigned with their work according to their job charters and they will be supervised by the manager and in his/her absence the most senior staff presence will take over the responsibilities; &
  (ii) Staff will be briefed on a need-to-know basis regarding the daily running of TKLY, the supervision/running of all the facilities and services to be provided to members of the public. The Applicant will ensure all staff know their own roles and duties and ad hoc meetings will be convened by the Applicant or her manager to discuss and evaluate current issues regarding the quality running of TKLY. The Applicant will ensure the manager and all staff are conversant will the Management Plan and Contingency Plan of TKLY so that they can take immediate and appropriate action in dealing with different types of incidents that may occur in relation with TKLY.

19. Contingency Plan for Fire or Other Emergency Situations To Be Executed by Tin Kwong Lun Yee in compliance with Section 97(f) of the Private Columbaria Ordinance Cap 630

19.1 In accordance with Section 97(f) of the Private Columbaria Ordinance, Cap 630, the Applicant of TKLY is required to submit a 'Contingency Plan in the event of fire or other emergency situations', in addition to other management plans, to the Licensing Board for scrutiny in relation to her application of Columbarium Licence for TKLY.

19.2 In relation to the Applicant's application to the Licensing Board for a Columbarium Licence, the following contingency plan is hence compiled in compliance with the aforesaid Ordinance in order to enhance the successfulness of the application, namely :-.

(a) **Fire Prevention Execution**

The Applicant will ensure the adoption of all fire prevention measures as per Fire Service Department requirement.

(b) **Emergency Evacuation Plan**

An emergency evacuation plan will be prepared by the manager of

TKLY as directed by the Applicant for TKLY site and its columbarium halls and all staff will be briefed to be conversant with the plan so that they can assist worshippers in quick evacuation in case of emergency. The followings are the emergency procedures to be adopted by TKLY, namely :-

- In the event of fire, alert others by shouting "Fire" & report the fire by dialing '999' and give the name & address of TKLY to Police & FSD.
- If it is safe to do so, remove combustibles away from fire.
- When the magnitude of fire is small & it is safe to do so, use fire extinguishers to put out the fire. If the fire is large or uncontrollable, immediate evacuate all visitors out of the fire compartment/floor.
- After all personnel have been evacuated, close the door of fire compartment/floor and evacuate all visitors to the **designated assembly point.**
- In the event of emergency during festive days manpower deployed at key locations at TKLY will assist patrons in evacuation to the **designated assembly point set at the Basketball Court by the east side of Hing Fu Street cul-de-sac roundabout.**
- In emergency situation(s) staff/security guards deployed inside and outside the 6 columbarium halls of TKLY will immediately guide/direct worshippers to leave the respective columbarium halls to the compound and leave via the main entrance of TKLY.
- Leave TKLY via the unnamed concrete slip road to go downhill to Hing Fu Street cul-de-sac roundabout and to the designated assembly point set at the Basketball Court, Hing Fu Street.
- Staff in the Admin Office will exit the office and leave the site as quickly as possible.
- All shuttle buses stationed at the shuttle bus bay will be driven down to Hing Fu Street for temporary parking.
- All visitors' cars parked w/i TKLY will be asked to drive the cars down to Hing Fu Street as quickly as possible.
- The Applicant will ensure the emergency evacuation route within TKLY is free of obstruction at all times.
- The Applicant will ensure that all her staff deployed will be conversant with the Management Plan & the Contingency Plan,

all evacuation routes from the 3 columbarium blocks to the designated assembly point, and the locations and operation of the fire extinguishers.

- The Applicant will liaise with Police/FSD firemen deployed at scene for providing information and assistance.

(C) **Fire Service Installations/Fire fighting Equipment/Storage of Joss Materials**

- The Applicant will ensure all fire service installations and equipment provided for TKLY including the 6 columbarium halls will be maintained in efficient working order.
- The Applicant will employ a Registered Fire Service Installation (FSI) Contractor for all maintenance, alterations and additions for TKLY including the columbarium.
- The Applicant will employ the Registered FSI Contractor to prepare the **fire escape route plans** for TKLY including the columbarium halls.
- The Registered FSI Contractor shall issue Certificate(s) of Fire Service Installations and Equipment (FS 251) to the Applicant with copies forwarded to the Director of Fire Services via the respective Regional Office of the Licensing and Certification Command within 14 days after completion of works.
- A Certificate of Compliance (FSI/314A or FSI/314B as appropriate) will be submitted by the responsible Registered FSI Contractor to the Director of Fire Services via the respective Regional Office of the Licensing and Certification Command for the alteration and addition works.
- Portable firefighting equipment of the approved type will be provided by the Applicant for TKLY, namely :-
  (i) Six x 9L water type fire extinguisher(s) at the columbarium halls; &
  (ii) Six x 4.5kg CO2 gas type fire extinguisher(s) at the columbarium halls.

- The Applicant will also ensure the implementation of the following measures, namely :-
  (i) All fire extinguishers are in good working condition, be kept clear from any obstruction, clearly indicated as

regard to their locations and methods of operation and be inspected by Registered FSI Contractor at least once every twelve months;

(ii) Emergency lighting shall be provided for TKLY including the columbarium halls;

(iii) All exits will be suitably indicated by illuminated signs and if the exit are out of sight to any location within TKLY including the columbarium halls, suitable directional signs in the same dimensions as the exit signs shall be provided to assist patron to identify the exits in the event of an emergency;

(iv) All combustible materials used as altars, false ceilings, partitions or wall furnishings inside the columbarium halls should conform with FSD required standard;

(v) All means of escape routes will be kept free from obstruction;

(vi) Access route will be provided for FSD to reach the columbarium;

(vii) A suitable store room or cabinet should be provided for the storage of joss materials, if any (there will be no burning of incense materials i/s TKLY permitted, hence, there will not be any store room built to store joss materials by TKLY);

(viii) No kerosene & lamp oil will be kept inside TKLY as no burning of joss sticks and incense materials are permitted inside TKLY site; &

(ix) No storage of any dangerous goods exceeding the exempt quantity in accordance with the Dangerous Goods (General) Regulations, Cap 295B.

(d) To further adhere to the FSD fire prevention requirement, the Applicant undertakes to appoint the manager as the **Fire Security Manager** (FSM) for TKLY.

19.3 The 6 columbarium halls situated within TKLY are equipped with fire extinguishers. The Applicant undertakes to employ fire contractor to conduct evaluation of fire precaution measures for TKLY including the columbarium halls in order to upgrade the fire prevention measures that need to be put in place in order to comply with the FSD fire regulations

as well as to comply with the Application Guidelines regarding fire prevention.

19.4 The Applicant undertakes to install CCTV system inside TKLY to monitor the activities inside the site, especially for activities during festive days. The CCTV monitor panel with 24-hour recording function will be installed in the Admin Office on the G/F of columbarium block 2 for staff to monitor the activities inside TKLY.

19.5 The Applicant undertakes to set up house rules and ensure no burning of incense materials be carried out inside the columbarium halls as well as inside the site during the course of worship. Worshippers will be seriously reminded about this rule.

19.6 The Applicant will ensure that fire equipment such as fire extinguishers, in good working order, be placed at appropriate and easy-to-reach locations at all the columbarium halls and other suitable places within TKLY to serve as fire prevention measures.

19.7 The Applicant will direct the manager to set up a fire prevention team in dealing with the break out of fire. **Fire escape route floor plans** concerning escape routes to be prepared by the registered fire contractor concerned will also be affixed at prominent locations within TKLY including the columbarium halls, serving as a clear guide for fire escape. The fire escape routes will be checked periodically to ensure no obstruction is caused to the routes, in particular prior to the commencement of the festive seasons.

19.8 The Applicant will ensure that during festive days staff/security guards on duty are equipped with walkie talkie for easy communication.

19.9 The manager will set up a command post (CP) at the Admin Office in order to monitor the worshipping operations.

19.10 AMS (醫療輔助隊) personnel will be employed to station inside TKLY to provide first-aid services to worshippers. First-aid box is available inside the Admin Office.

19.11 The Applicant undertakes to adhere to the Fire Safety Requirements for Private Columbaria as stipulated by the Fire Service Department (FSD) which includes the Guideline for 'Fire Safety Plan' of Private Columbaria (PC), Fire Safety Instruction – for PC staff and Information required in Fire/Emergency Evacuation Route Plan'.

Fire Security Manager (FSM)

19.12 The manager of TKLY will be appointed as the FSM and he/she is responsible for the following responsibilities, viz :-

- Maintain up-to-date list of Fire Prevention Team (to be reviewed annually) and to liaise with Fire Protection Command of the FSD to arrange training in fire-fighting and fire prevention for the team e.g. the proper use of fire extinguishers
- To liaise with the registered fire contractor concerned to conduct periodical check regarding fire prevention measures adopted by TKLY
- Liaise with the registered fire contractor concerned to ensure fire escape route plans for TKLY are well prepared and to display them at appropriate locations within the site
- To action in the event of fire
- At the end of working period ensure all electrical appliances are switched off and/or unplugged as necessary
- Check that inflammable material is properly stored, if any
- Ensure fire prevention measures are well in place within TKLY
- To check fire preventing equipment in good working order regularly and escape routes are not obstructed, especially prior to the festive days
- Arrange fire drill to be carried every six month
- Brief staff/security guards about fire prevention/fire-fighting and the locations of the fire extinguishers before the commencement of every worshipping season.

Immediate Action on Discovery of Fire

19.13 The person who discovers the fire will :-

- Raise the Alarm by shouting "FIRE" "FOH CHUK (火燭)" .
- Take all possible action to extinguish or contain the fire

  N.B. DO NOT USE WATER OR SODA ACID EXINGUISHERS AGAINST ELECTRICAL FIRES UNTIL BEING TOLD THAT THE ELECTRICAL CURRENT HAS BEEN SWITCHED OFF BY THE PERSON WHO DID SO.
- Ensure that the FSM is immediately informed of the outbreak of fire. The responsibility to request for the assistance of FSD, through the '999' system, will rest with the FSM, except in his/her absence, the most senior staff present at the scene of fire takes over the responsibility.

Action by FSM

19.14 In the event of fire, the FSM will take the following actions, viz :-

- Ensure to dial "999" to call for Police and FSD assistance.
- To dispatch all available staff, fire prevention team and security

personnel to the scene of fire to assist in fire-fighting operations.

- Instruct staff/security guards to arrange immediate and orderly evacuation of worshippers through the escape routes and leave TKLY through the main entrance and to leave quickly downhill via the unnamed concrete slip road to reach Hing Fu Street cul-de-sac roundabout and then to the **designated assembly point** set at the Basketball Court located by the east side of the roundabout.
- Arrange the air-conditioning system of the 3 columbarium blocks to be switched off, if any.

Action at the Scene of Fire

19.15 Under the command of FSM present at the scene of fire, the fire prevention team, remaining staff and security guards are to :-

- Take all possible action to extinguish or contain the fire but safety be the priority.
- Check if any persons are trapped by the fire within the columbarium halls and office rooms and if necessary try to rescue them.
- Remove all casualties from the scene of fire to safe place for immediate medical treatment to be provided by AMS personnel & ambulance be called immediately.
- TKLY staff will try their best to close all windows and doors in the vicinity of the fire and switch off fan and/or room air-conditioning units.
- Remove all inflammable material, if any.
- FSM to delegate a security guard to meet FSD personnel at the main entrance of TKLY.
- FSM to ensure security guards are deployed to the unnamed concrete slip road and Hing Fu Street cul-de-sac for crowd management.
- If the fire is of a serious nature and/or more than one fire has broken out and that danger is imminent, all persons including worshippers, TKLY staff and security guards will be immediately evacuated from the scene of fire to the designated assembly point set at the Basketball Court, east of Hing Fu Street cul-de-sac.
- FSM is to liaise with Police deployed at the scene for crowd management and to arrange a quick evacuation and orderly dispersal of worshippers away from the fire scene to the aforesaid designated assembly point.
- FSM to liaise with Police and the senior FSD officer attending the fire to ensure all aware of the prevailing danger.

Escape Routes

19.16 The escape routes for worshippers at the 6 Columbarium Halls are :-

- For the 3 columbarium halls located on the G/F of the 3 columbarium blocks, the worshippers will be guided by staff and security guards to leave the respective columbarium halls via the entrances of the columbarium halls to the compound and then retreat south to the main entrance of TKLY, then go downhill via the unnamed concrete slip road to the designated assembly point set at the Basketball Court, east of Hing Fu Street cul-de-sac roundabout.
- Worshippers inside the 3 columbarium halls on the 1/F of the 3 columbarium blocks will be guided/directed by staff/security guards to go down staircases/ramps to the entrance of each columbarium block and to the rear alley behind the columbarium blocks and then disperse towards south to the main entrance of TKLY. Then go downhill via the unnamed concrete slip road to the assembly point located at the Basketball Court, east of Hing Fu Street cul-de-sac roundabout.
- Worshippers at the holding area will immediately be directed to move south towards the main entrance of TKLY and proceed downhill via the unnamed concrete slip road to the aforesaid designated assembly point.
- For the Admin Office and other rooms located inside TKLY, those inside will immediately proceed to the compound and join with other dispersal groups to leave TKLY via the main entrance and go to the aforesaid designated assembly point for assemble.
- Shuttle buses parked at the shuttle bus bay will be driven away by drivers concerned and park the buses temporary at Hing Fu Street awaiting for further order from the Applicant.
- Car owners will as far as possible be informed to drive away their cars down to Hing Fu Street for temporary parking or be directed to drive away after taking back their disabled/elderly.

Removal of Important Documents

19.17 When the severity of the fire is known, removal of important documents placed inside the Admin Office to a safe place such as to the assembly point at Hing Fu Street may be considered. The FSM will direct his/her staff to take such action, if possible and to take care of necessary items.

Fuse Boxes and Fire Fighting Equipment

19.18 It is imperative for the FSM to brief staff to remember that the electric current must be switched off at the fuse box controlling electricity supply to the area of the fire before any attempt is made to extinguish a serious fire or one involving electrical apparatus. The staff must be well aware of the locations of fuse boxes and fire-fighting equipment.

Action During Other Emergency Situations

Action in Person Collapsed, Sick Person and Person Accidental Injured Cases

19.19 Person collapsed or sick person cases :-

- FSM, relevant staff and/or security guards to attend the scene immediate and assess the situation
- Directive be given to remove the person collapsed or sick person to a shaded & spacious area for a rest and call for ambulance
- If first-aid treatment is needed, those who know first-aid will attend to the sick person concerned and AMS personnel stationed inside TKLY will be called to the scene to attend to the sick person.
- Inform CP to call for ambulance, if immediate need is necessary
- Ensure the person collapsed or sick person is escorted to hospital by family members/Police, if possible
- FSM is to ensure security guards continue with their crowd management duties in order to ensure no panic from other worshippers

19.20 Person accidental injured cases :-

- Attend the scene immediate and assess the situation
- Depend on the seriousness of the injuries, do not move the injured
- Inform CP to call for ambulance, if necessary
- Cordon off and contain the scene to ensure no further incidents to occur
- Ensure the injured is escorted to hospital by family members/Police, if possible

Action in Landslide or Building Collapse Cases

19.21 Landslide or building collapse cases :-

- Attend the scene immediate and assess the situation
- Inform the CP and conduct rescue and attend to injured
- CP is to dial "999" to call for Police and FSD and ambulance to attend scene
- If the situation is serious, try as far as possible remove the injured to a safe place waiting for the arrival of ambulance
- Conduct evacuation immediate and tell those uninjured to leave TKLY via the main entrance, unnamed concrete slip road down to the designated assembly point as quickly as possible
- Try to obtain information from the Police regarding relevant Government Department staff to attend scene to evaluate the damaged situation
- FSM to liaise with the senior FSD officer present at the scene of rescue in order to obtain relevant and fresh information

- Try to identify the death, if any and the injured and next action is to inform family members about the incident
- In this type of case, the Application is to ensure that any retaining walls, if any, close to the precinct of TKLY are well maintained in good condition

Nature & Handling of Emergency Situations

19.22 Emergency situations are by no means exhaustive and those common situations are highlighted in the above paragraphs. TKLY staff and security personnel involved in festive operations need to be well trained for handling imminent situations that require prompt attention and be alert at all times when conducting the operations and be prepared to handle emergency situations at short notice. To equip themselves with sufficient knowledge in dealing with sudden incidents, in particular during festive days and to ensure that they comply with the Private Columbaria Ordinance/Application Guidelines.

Useful Telephone Contacts of FSD

19.23 Useful telephone contacts of FSD is at **Annex 'E'**.

20. Measures to ensure Compliance with Licensing Conditions, Guidelines and Code of Practice Stipulated or Issued by the PCLB

20.1 At present, there are only 8 occupied niches inside TKLY and the Applicant use appointment system to arrange worshippers to conduct the worship during festive days. To enhance the successfulness of the application for the columbarium licence and in future when additional niches are permitted to be sold and interred, the Applicant undertakes to implement adequate administrative measures in compliance of the PC Ord, Cap 630 and the application guidelines issued by relevant authorities. To ensure easy control and safety of worshippers, a visit-by-appointment system via phone/Whatsapp/email/SMS/ newsletters for booking the worshipping visits will be introduced including E-booking of the free shuttle bus services across the whole festive period (a total of 9 days). This admission control by way of visit-by-appointment system will be strictly adhered to so as to ensure the smooth running of the festive events. The specific time slot visits' record with details of the niche purchasers, number of their accompanying visitors, the time-in and time-out log & used of free shuttle bus services will be recorded and be kept in the Admin Office of TKLY for ad hoc checking during festive days, if necessary. TKLY will adhere strictly to the visit-by-appointment system & the distribution of visitors to respective columbarium halls by way of tidal flow system so that each columbarium hall will not exceed the permitted capacity at any

one time.
Signs indicating the holding capacities of each columbarium hall will be affixed at prominent location of each columbarium hall for the notice of visitors and such signs will be maintained in good conditions.

20.2 The Applicant will also provide information to worshippers regarding details of the special traffic/crowd management measures that may be implemented by TKLY during the 9 days festive period which span across Ching Ming or Chung Yeung Festivals and any change that might be made to such an arrangement. Signage will also be displayed inside TKLY to remind visitors to follow the house rules during festive days. Directional signs will also be placed at suitable locations inside/outside TKLY to guide the incoming/outgoing worshippers.

20.3 To employ a professional security company so as to provide sufficient security personnel to assist TKLY staff to implement traffic/crowd management measures during Ching Ming and Chung Yeung Festivals.

20.4 Staff and security personnel deployed for the operation will be equipped with walkie talkie for internal communication so as to enhance the efficiency of the festive operation(s).

20.5 The Applicant undertakes to direct the manager to set up a Command Post (CP) at the Admin Office, G/F of columbarium block 2 to monitor and cover the operation(s) during the festival days.

20.6 To implement adequate security measures to ensure the safety of worshippers as well as the columbarium halls and the whole TKLY area. CCTV and Aerial Overhead Surveillance Cameras will be installed inside TKLY to monitor the worshipping activities and the deployment of adequate security personnel to cover the operation(s). Broadcasting system will also be installed inside TKLY to broadcast message to visitors, e.g. the in-flow of visitors arrangement and the staggered release of visitors into respective columbarium halls for worship, if situations dictate.

20.7 No burning of incense materials inside the respective columbarium halls and inside the site will be permitted and worshippers will be reminded about this rule well in advance prior to the festive days. Signs with 'No Burning of Incense Materials' will be affixed at prominent locations inside the columbarium buildings to remind visitors.

20.8 The Applicant will ensure the quick implementation of contingency plan

in case of fire or other emergency situations.

20.9 To employ Auxiliary Medical Service (AMS) (醫療輔助隊) personnel to station inside TKLY for the provision of medical service to worshippers during the festive days.

20.10 The Applicant undertakes to direct the manager to set up plastic mills barriers, cordon tapes and cones at the compound of TKLY to set up the holding area and to delineate the in-flow and out-flow routes of worshippers. To deploy staff/security guards to direct the parking of cars, which carry disabled/elderly into respective car parking spaces and the parking of shuttle buses into the shuttle bus bay; and to assist the debus of passengers from cars/shuttle buses.

20.11 The Applicant undertakes to inform niche purchasers that no parking facilities will be provided by TKLY during the festive periods except for disabled/elderly and they need to book the parking via advance E-booking.

20.12 Worshippers will be reminded to adhere to the use of free shuttle bus services provided by TKLY to access and depart the site and that advance booking via E-booking is required.

20.13 Those minority worshippers who do not use the free shuttle bus services are strongly encouraged to use public transport to access TKLY in order to minimize traffic impact in the vicinity of TKLY.

20.14 In order to improve the condition of the unnamed concrete slip road leading to TKLY, the Applicant proposed to widen the road to provide a 1.5m wide footpath passage for worshippers on foot to and from TKLY; and that there are adequate road width for the travelling of the shuttle buses. Two passing bays along the road will also be built to enhance the smooth running of the shuttle bus services, sketch of the proposed road widening is at **Annex 'D'.**

20.15 TKLY will affix notice at the main entrance informing visitors about the operation hours of TKLY during the whole festive period (a total of 9 days, i.e. the main day and 2 consecutive weekends before & after the main day).

20.16 TKLY will affix at the entrance of each columbarium hall floor plan indicating to the visitors the method of crowd management inside the site including visitors' flow, direction of flow, waiting & line up area(s)/restricted area, staff static posts, AMS post & escape route plans

& assembly point for the notice of visitors.

20.17 TKLY will ensure that notice with the holding capacity of each columbarium hall, in English & Chinese, is affixed at prominent location at each columbarium hall and to ensure that the notices are well maintained for the information of visitors.

20.18 TKLY will ensure that cigarette smoking is not permitted inside the columbarium halls with 'No Smoking' signs affixed at prominent locations.

20.19 TKLY will also provide customer services for bulk belonging bring by the visitors, if necessary.

20.20 At any time according to the volume of visitors implement effective management plan to provide traffic/crowd movement management to ensure safety and orderly worshipping activities inside TKLY.

20.21 To display at prominent location(s) within TKLY the name & telephone number of the staff, who handles enquiries & complaints in relation to TKLY and worshipping activities.

20.22 TKLY will keep record of staff training including contents of the training materials, date of training & names of staff participated in the training and will provide information on the request of the relevant Columbarium Office.

21. Handling of Complaints

To comply with the Private Columbarium Ordinance and the Application Guidelines, the Applicant undertakes to implement a complaint mechanism to handle all complaints in relation to TKLY, namely :-

- Set up a complaint mechanism to deal with all complaints regarding the management and service to be provided by TKLY. The manager or in his/her absence, the most senior officer, will be the overall in-charge and decision maker for all the complaints received. An admin staff will be appointed as complaint handler for all the complaints in relation to TKLY.
- All complaint(s) will be recorded in computer and will be divided into different categories for easy handlings and data processing.
- The complaint handler will be assigned to input information of the complaints in the computer for subsequent handling and investigation.
- The complaint handler will be assigned as investigator for handling complaints and he/she will be responsible for contacting the complainants for enquiries and

investigation of the complaints.

- Channel for receiving complaints – staff of TKLY on receiving a complaint will report it to the complaint handler of Admin Office and details of the complaint will be recorded in the computer including the nature, date & time of the complaint, details of the complainant and the complaint for follow-up action and subsequent reply.
- A performance pledge will be set up regarding period of investigation and the period of response to the complaint. Normally, reply to the complainant will be provided within one month, unless in urgent situation where the reply will be provided within 7 working days or as soon as possible.
- If there is a need to take remedial action, the complaint handler will report the nature/suggestions to the manager and the latter will refer them to the Applicant, who will then direct what kind of action, if appropriate, to be taken as soon as possible in order to maintain/upgrade the quality services provided by TKLY.

22. Financial Plan

The financial plan will be enclosed in a separate envelope which has been marked "Annex to Management Plan Item (11)".

23. Person Responsible for the Implementation and Approval of the Management Plan

The particulars of the person responsible for the implementation of and approving the management plan.

Name:	**Miss YIP Yuk-ping, Rita**
Position:	**Applicant**
Contact No.:	**9871 9555 / 9873 5550**
Email Address:	**ritayukping@yahoo.com.hk**

Submitted for and on behalf of the above-named columbarium

Name:	**Miss YIP Yuk-ping, Rita**
Position:	**Applicant**
Contact telephone no.:	**9871 9555 / 9873 5550**
Email address:	**ritayukping@yahoo.com.hk**
Signature:	*For and on behalf of* **Tin Kwong Lun Yee Limited** 天光隆義有限公司
Date:	*Authorized Signature(s)*

28 JUN 2019

List of Annexes

Annex A	Bus Routes, Green Mini Bus Routes, LRT Routes to Tin Kwong Lun Yee, Tuen Mun
Annex B	Supply & Distribution of Manpower of Tin Kwong Lun Yee
Annex C	Specific Duties of Staff/Security Personnel of Tin Kwong Lun Yee
Annex D	Location Map, Master Layout Plan & Free Shuttle Bus Routes to/from Tin Kwong Lun Yee
Annex E	Useful Telephone contacts of TD, Police, FSD & AMS
Annex F	Pictures of Tin Kwong Lun Yee, its Columbarium Halls, route leading to Tin Kwong Lun Yee from Tin King LRT Stop, Tuen Mun & Emergency Evacuation Route(s)

Annex 'A'

Bus Routes, Green Mini-Bus Routes & LRT Route to Tin Kwong Lun Yee, Tuen Mun

Public Transport	**From**	**To**
Bus Route No.		
58M	Leung King Estate Bus Terminus	Kwai Fong Stn Bus Terminus (Route thro' Ming kun Rd o/s Po Tin Estate, Tuen Mun) (Round Trip)
58P	Kwai Fong Stn Bus Terminus	Tin King Estate (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round Trip)
58X	Leung King Estate Bus Terminus	Mong Kok East Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
258D	Po Tin Estate PTI	Lam Tin Stn (Round trip)
258S	Shan King bus Terminus	Lam Tin Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
258X	Po Tin PTI	Kwun Tong Ferry (Route thro' Ming Kum Rd o/s Po tin Estate, Tuen Mun) (Round trip)
260X	Po Tin PTI	Hung Hom Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)

960	Kin Sang Bus Terminus	Wanchai North (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
960A	Central (Pottinger St)	Hung Shui Kiu (Hung Fuk Estate) (Round trip)
960B	Quarry Bay	Hung shui Kiu (Hung Fuk Estate) (Round trip)
960X	Hung Shui Kiu (Hung Yuen Rd)	Quarry Bay (King's Rd)
961P	Leung King Estate	HKCEC (Round trip)
Green Minibus Route No.		
40	Siu Hang Tsuen	Tuen Mun Town Centre (route thro' Po Tin Estate, Hing Kwai St) (Round trip)
44A	Tuen Mun Stn	Sheung Shui Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
44A1	Po Tin Estate, Tuen Mun	Sheung Shui Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
44B	Tuen Mun Stn	Lok Ma Chau PTI (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
LRT Route		
505	Sam Shing	Siu Hong (Stop at Tin King Stop)

507	Tuen Mun Ferry Pier	Tin King
615	Tuen Mun Ferry Pier	Yuen Long MTR & LRT Stn
615P	Tuen Mun Ferry Pier	Siu Hong

Remarks : The routes are from one location to the other and vice versa.

Annex 'B'

Supply & Distribution of Manpower of Tin Kwong Lun Yee Staff/Security Personnel

For

Traffic & Crowd Management

Supply of Manpower by Tin Kwong Lun Yee Management

Manpower	Applicant & Manager	TKLY Staff	Security Guards
No.	2	13	32

Distribution of Manpower by Tin Kwong Lun Yee Management

Location	Applicant/Manager	TKLY Staff	Security Guards
Command Post	2		
Main Entrance of TKLY		1	2
Unnamed Concrete Slip Rd leading to TKLY/Hing Fu St cul-de-sac R/A		2	2
Unnamed Concrete Slip Rd bet. Hing Fu St R/A & Main Entrance of TKLY			2
Holding Area at the Compound in front of the 3 Columbarium Blks		3	6
Shuttle Bus Bay i/s TKLY facing the Compound		1	2
Departure Area		1	2

behind the Shuttle Bus Bay			
I/s the 6 Columbarium Halls (1 Security Guard in each hall)			6
Open area of the Compound o/s each Columbarium Halls			3
Private Car Park Area i/s TKLY		1	2
Rear Platform & ramps behind Columbarium Blk 1 - 3		2	3
MTR West Rail Siu Hong Stn North PTI General Layby		2	2
Total	2	13	32

Annex 'C'

Specific Duties of Tin Kwong Lun Yee Staff/Security Personnel for Traffic and Crowd Management

Location	Rank	Duties
TKLY area/Command Post	Applicant & Manager 2	• Overall supervision of TKLY site, staff & security guards for traffic/crowd management • Oversee the implementation of the Special Traffic & Crowd Management arrangement for TKLY • To ensure the implementation of the visit-by-appointment & admission control system inside TKLY • To employ professional security company to provide professional security guards for traffic/crowd management for TKLY • To employ professional transport company to provide adequate shuttle buses to conduct the free shuttle bus services bet. TKLY & MTR West Rail Siu Hong Stn North PTI • To ensure the efficient running of the free shuttle bus services provided by TKLY • To command the CP for the command/deployment of duties for traffic/crowd management i/s & o/s TKLY • Act as a point of liaison with Police/FSD, if necessary • Deal with emergency situations • Deal with evacuation situation, if

		required ● Oversee the operation of the CP ● Conduct detailed briefing for TKLY staff/security guards regarding traffic/crowd management prior to the operation ● Coach staff/security guards on traffic/crowd management to be adopted, if necessary inside TKLY ● Brief staff/security guards regarding the handling of emergency situation/evacuation ● Ensure staff vigilance & diligence thro' visits to static locations i/s & o/s TKLY ● Deal with complaints & trespassers ● Deal with reported/ad hoc incidents ● Conduct 'After Action Review' for the operation for future improvement, if required ● Arrange meal break for TKLY staff/security guards
Main Entrance of TKLY	TKLY staff 1 Security guard 2	● To welcome & guide worshippers into TKLY ● To conduct traffic control for in-coming free shuttle buses/private cars with disabled/elderly ● To verify the validity of P/Cs carrying disabled/elderly ● To verify ad hoc visitors & late comers ● To help to implement the admission control system ● To guide visitors to the holding

		area set up at the compound o/s the columbarium blks ● Maintain close radio communication with the CP and staff/security guards deployed at key locations w/i TKLY for crowd management. ● Deal with any ad hoc incidents ● Deal with emergency situations ● Deal with evacuation situation, if required ● To assist Police when called for
Unnamed Concrete Slip Rd leading to TKLY/Hing Fu St cul-de-sac R/A	TKLY staff 2 Security guard 2	● To conduct traffic/crowd management, if required ● To assist free shuttle buses to go up the unnamed slip rd leading from Hing Fu St to TKLY ● To verify ad hoc visitors & assist visitor cars w/o advance booking to stop at the R/A for alighting visitors & guide the vehicles to leave the R/A as quickly as possible w/o causing any blockage at the R/A ● To monitor the in-flow/out-flow of worshippers to and from the TKLY & the R/A ● To liaise closely with those deployed at the entrance for traffic & crowd management ● Give advice to worshippers on enquiries ● Maintain radio communication with the CP regarding the flow of worshippers/vehicles ● Deal with any ad hoc incidents ● Deal with emergency situations ● Deal with evacuation, if required

		• To assist Police when called for
Unnamed Concrete Slip Rd bet. Hing Fu St R/A & main entrance of TKLY	Security guard 2	• To assist shuttle buses going up & down of the unnamed slip rd • To guide/direct visitors to walk up/walk down the unnamed slip rd by the side of the rd in an orderly manner w/o creating any conflict with the flow of shuttle buses & P/Cs carrying disabled/elderly to & from TKLY • To patrol the unnamed slip rd to prevent accidents to occur • Maintain radio communication with the CP regarding traffic/crowd management • To deal with complaints on the spot or refer complaints to Manager to deal with, if necessary • Deal with ad hoc incidents • Deal with any emergency situations • Deal with evacuation situation, if required
Holding Area at the Compound in front of the 3 Columbarium Blks	TKLY Staff 3 Security guard 6	• To assist the Applicant to set up the holding area at the compound in front of the 3 columbarium blks • To arrange the worshippers to line up in 3 rows waiting to be released into the respective columbarium halls for worship (1 row for 1 columbarium blk) • To ensure worshippers line up in an orderly manner w/i the holding area • To implement the tidal flow system, if required

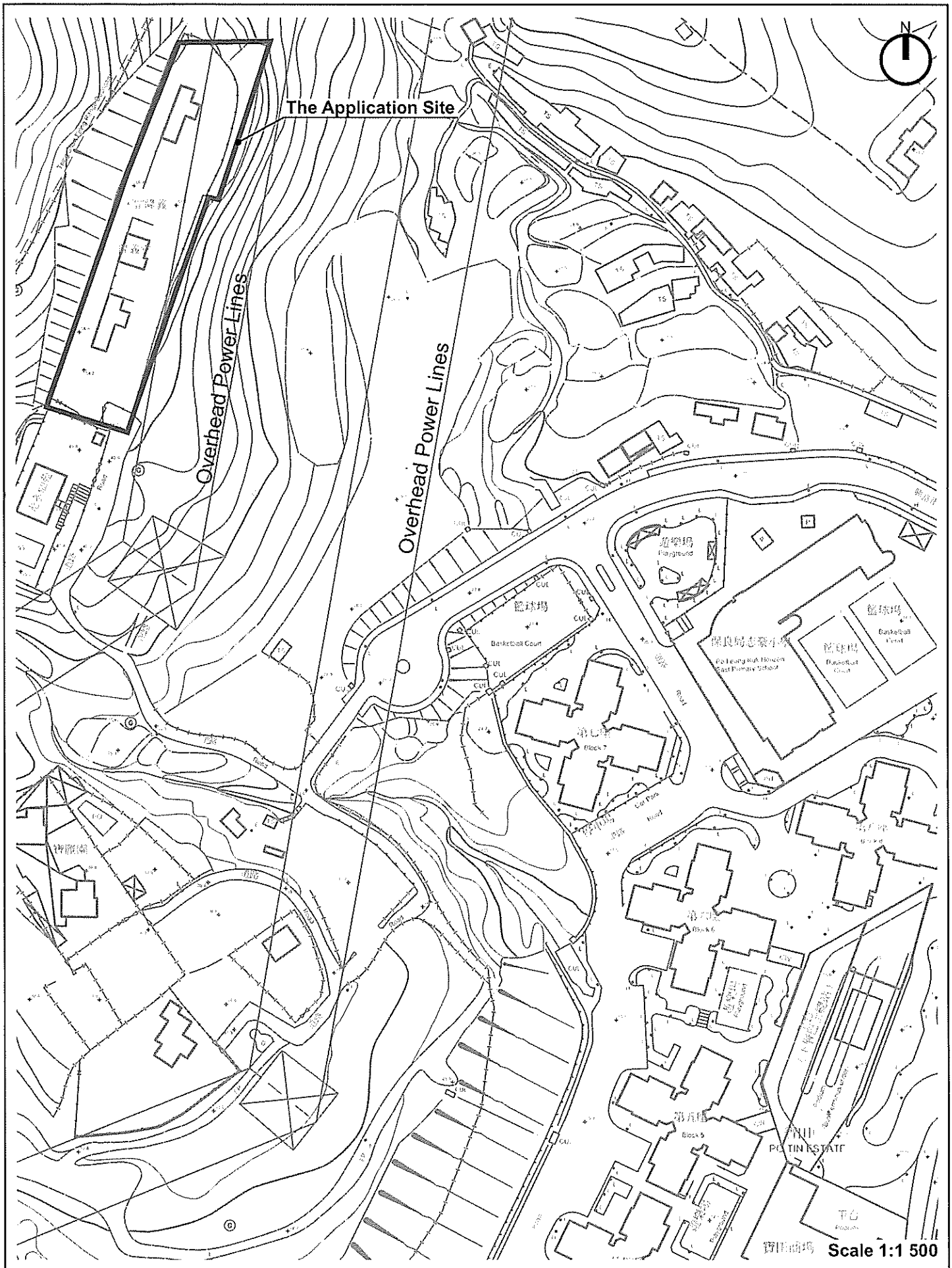
		• To ensure an orderly, steady and staggered release of worshippers into the respective columbarium blks
		• To arrange ad hoc visitors to wait at the holding area awaiting their turns to enter the respective columbarium blks for worship as priority will be given to those visitors with advance E-booking • Maintain radio communication with CP regarding crowd management i/s TKLY • Maintain radio contact with other staff/security guards deployed inside the columbarium halls to ensure no overflown of worshippers i/s the respective columbarium halls • Deal with complaints on the spot or refer complaints to Manager to deal with, if necessary • Deal with ad hoc incidents • Deal with any emergency situations • Deal with evacuation situation, if required
Shuttle Bus Bay i/s TKLY facing the Compound	TKLY Staff 1 Security guard 2	• To guide/direct shuttle buses to park at the parking spaces w/i the shuttle bus bay • To assist worshippers to alight from the shuttle buses & guide/direct them to walk towards the holding area set up at the compound o/s the 3 columbarium blks • Assist departing shuttle buses to

		leave the shuttle bus bay w/o causing any traffic/crowd conflict ● Maintain radio communication with the CP regarding the movement of worshippers within TKLY ● Deal with any ad hoc incidents ● Handle enquiries & complaints, if any ● Deal with casualty/injuries, if any ● Deal with any emergency situations ● Deal with evacuation situation, if required
Departure area behind the Shuttle Bus Bay	TKLY Staff 1 Security guard 2	● To arrange departing worshippers to wait at this gathering area where they can line up thereat waiting to get on board shuttle buses to leave TKLY for Siu Hong Stn North PTI for dispersal ● If the aforesaid area is fully occupied, arrange the worshippers to line up in single file at the rear alley behind the columbarium blks waiting for their turns to take the shuttle buses to leave TKLY ● Maintain radio communication with CP & other post duties regarding crowd management ● Deal with any ad hoc incidents ● Deal with sick/injuries, if any ● Deal with any emergency situation ● Deal with evacuation situation, if

		required
I/S the 6 columbarium Halls (1 security Guard in each Hall)	Security guard 6	• To monitor the worshipping activities i/s the respective columbarium halls • Worshippers finished worship on the 1/F of the 3 columbarium blks are guided/directed to leave the columbarium halls via the rear exits and walk down the ramps and staircases to the rear alley behind the columbarium blks & walk towards south towards the shuttle bus bay for taking the shuttle bus to leave TKLY • Worshippers finished worship at the 3 columbarium halls located on the G/F of the columbarium blks are guided to leave via the respective columbarium halls' entrances to the compound where they will be guided to walk south towards the shuttle bus bay for taking shuttle by to leave TKLY • To maintain radio communication with the CP regarding crowd management and those deployed at the holding area so as to ensure no overflown of worshippers i/s the respective columbarium halls • To ensure no burning of incense materials i/s the respective columbarium halls • Deal with any ad hoc situations • Deal with emergency situations • Deal with evacuation situation, if

		required
Open area of the Compound o/s each columbarium hall	Security guard 3	• To monitor the in-flow & out-flow of worshippers to/from respective columbarium halls • To ensure no conflict bet. Arriving & departing worshippers • To assist the drop-off of disabled and/or elderly at the car parking area & arrange the parking of P/Cs into the respective parking spaces • Maintain close radio communication with the CP regarding crowd management • To assist others deployed at the holding area for crowd management if called upon for • To take action in the event of emergency evacuation
Private Car Park Area i/s TKLY	TKLY Staff 1 Security guard 2	• To assist disabled/elderly to get off vehicles • To guide/direct P/C drivers to park cars into the allocated parking spaces • To ensure vehicles parking are conducted in a safe condition • To ensure the P/C drivers to leave TKLY on time (the allocated veh. parking time is not more than 30 minutes) • To maintain radio contact with the CP regarding the vehicle parkings and movement of worshippers • Be prepared to be re-deployed to other location(s) inside TKLY area for crowd control

		• To take action in emergency situation(s)
Rear Platform & ramps behind Columbarium Blk 1 - 3	TKLY Staff 2 Security guard 3	• To monitor the out-flow of leaving worshippers • To ensure an orderly dispersal of worshippers onto the rear alley behind the columbarium blks & that worshippers walk in the direction towards south for the shuttle bus bay area • Maintain close radio communication with CP regarding the dispersal of worshippers • Deal with ad hoc incidents • Deal with emergency situations • Deal with evacuation, if required
MTR West Rail Siu Hong Stn North PTI General Layby	TKLY Staff 2 Security guard 2	• To assist Shuttle Bus Service from Siu Hong Stn North PTI to TKLY • To verify the validity of worshippers who take the free shuttle bus services • Those w/o valid permits issued by TKLY will be denied using the free shuttle bus services • To assist worshippers to line up in an orderly manner at the general layby at the PTI for taking the free shuttle bus services • To guide/direct worshippers regarding dispersal at the PTI • To deal with ad hoc incidents • To maintain close contact with the CP regarding all matters in relation to the free shuttle bus services provided by TKLY.



Annex D

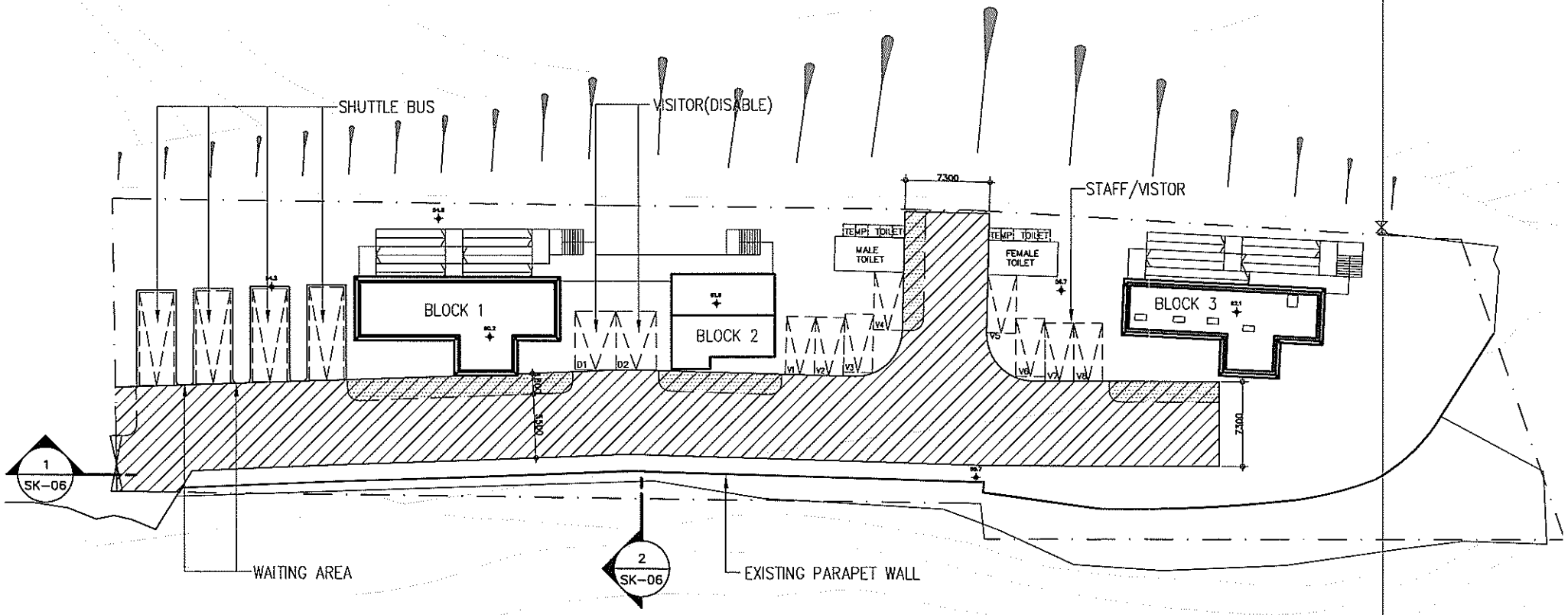
Plan A: Location Map of Tin Kwong Lun Yee

LEGEND

E.V.A

PEDESTRIAN ZONE

SITE BOUNDARY



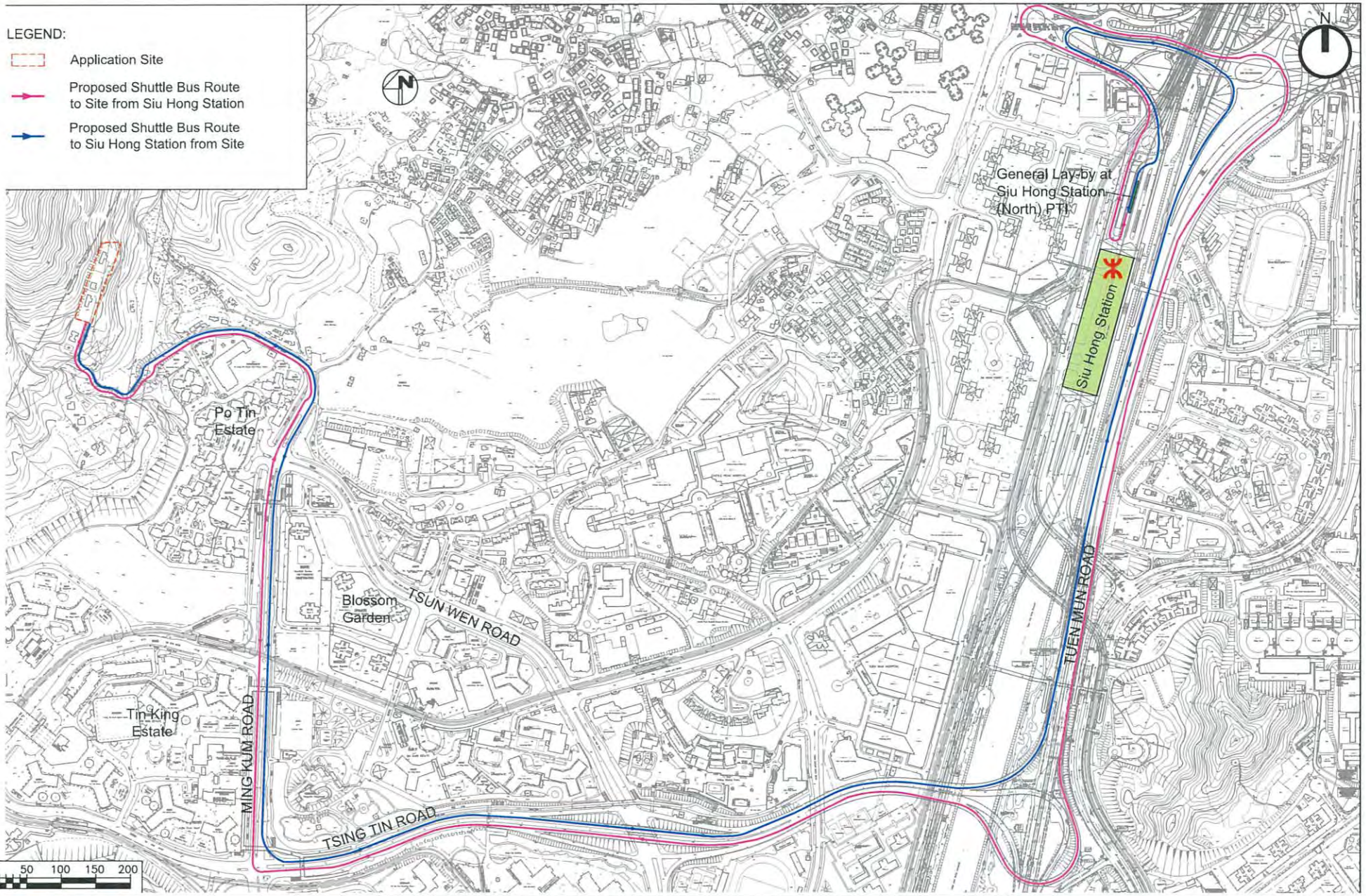
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卓東設計顧問有限公司
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TEL : 2339 2311
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Annex D

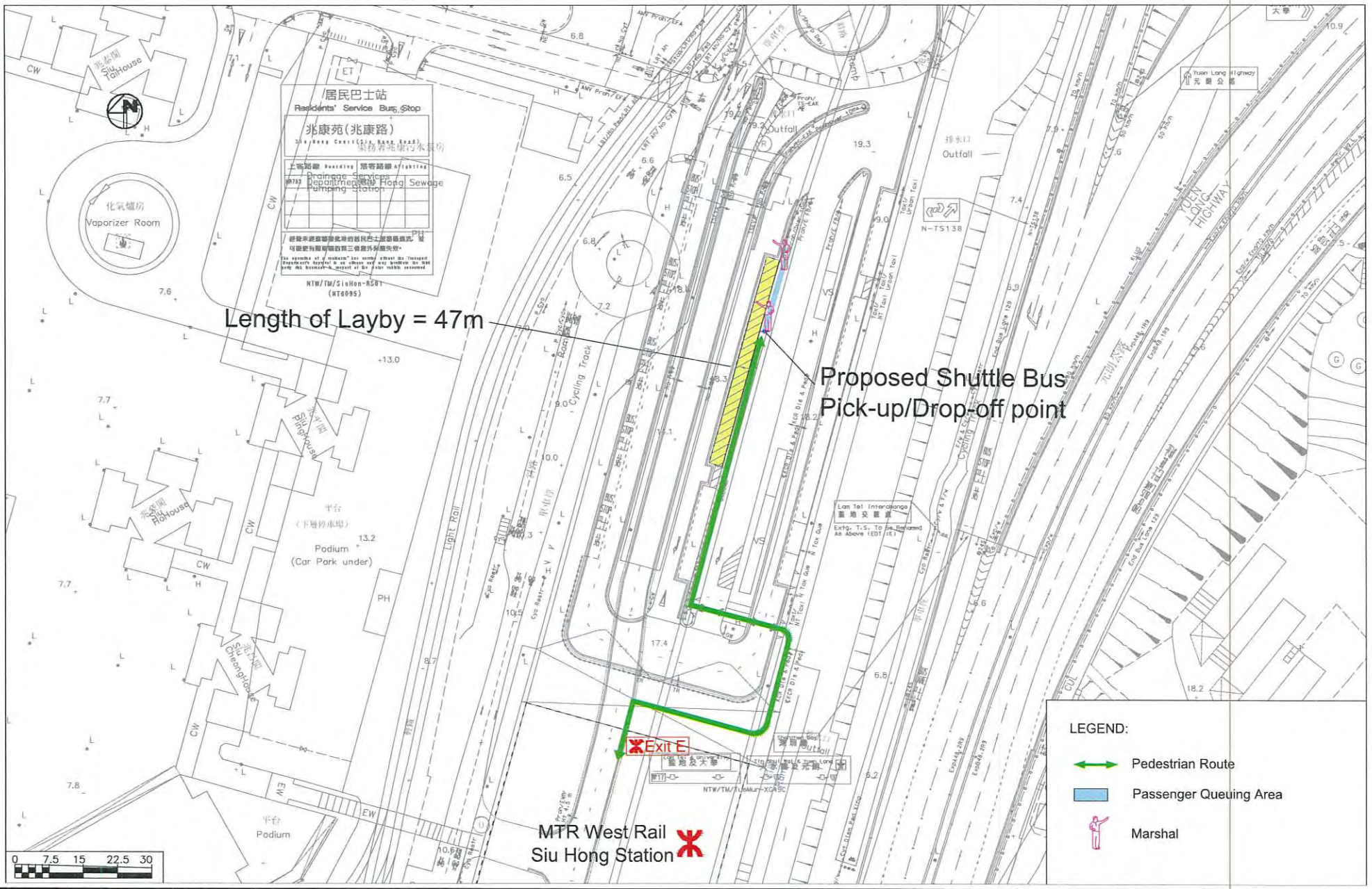
Plan B: Tin Kwong Lun Yee Proposed Master Layout Plan



OZZO TECHNOLOGY

Annex D

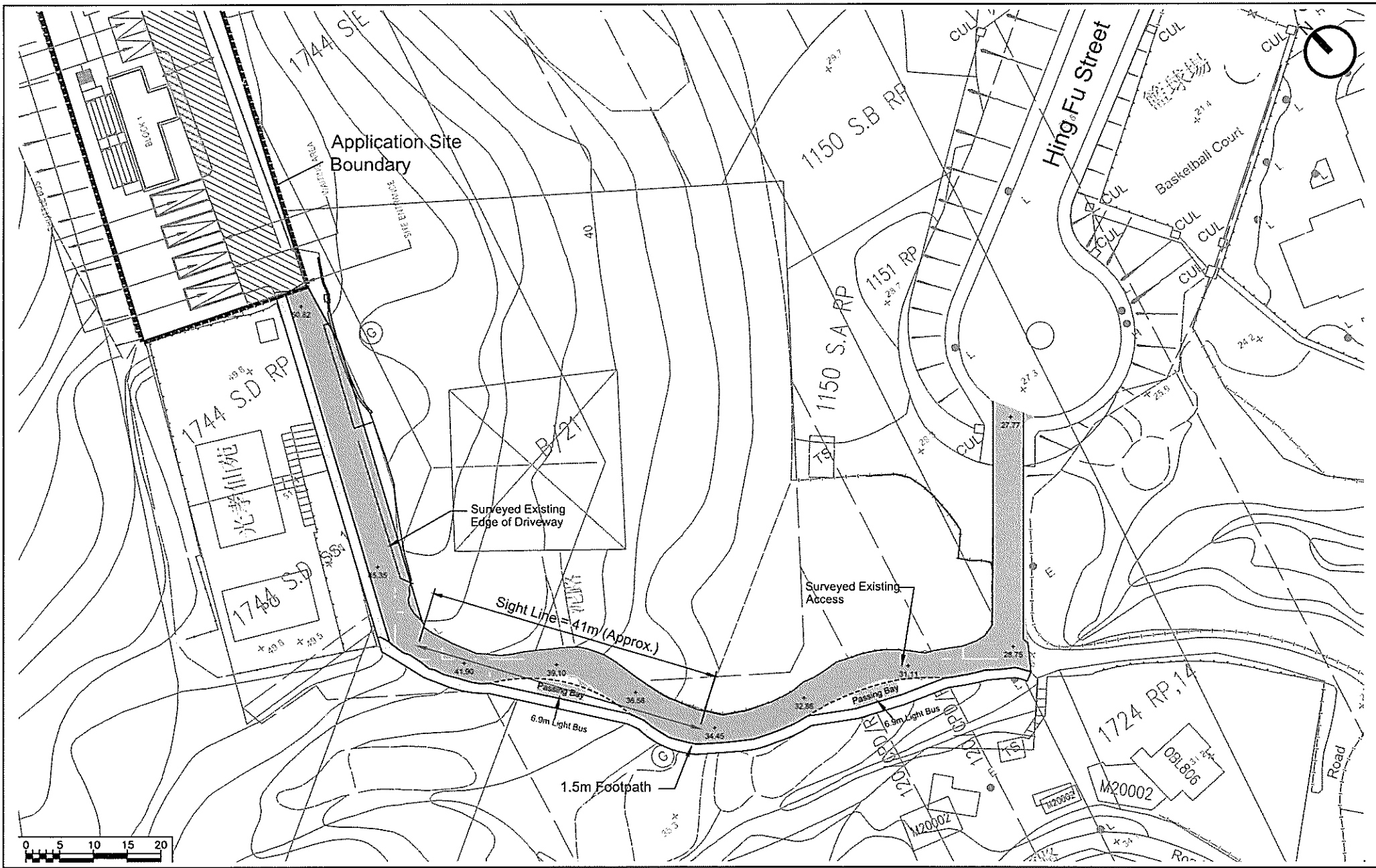
Plan C: Free Shuttle Bus Services From TKLY to MTR West Rail Siu Hong Stn North PTI & Vice Versa



OZZO TECHNOLOGY

Annex D

Plan D: MTR West Rail Siu Hong Station North PTI General Layby



OZZO TECHNOLOGY

Annex D

Plan E: Proposed Road Widening of the Unnamed Concrete Slip Road bet. Tin Kwong Lun Yee Site and the Hing Fu St Cul-de-sac R/A

Annex 'E'

Useful Telephone Contacts of TD & Police

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Ventilation Unit	fsvent@fsd.gov.hk	27187567	23822495

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Mr. CHAN Ka-wing, Calvin	Op(s) & Trg Offr (NTW)	27622044	ckwchan@ams.gov.hk

Annex 'F'

Pictures of Tin Kwong Lun Yee, Its Columbarium Halls, Holding Area(s) & Emergency Evacuation Routes

	**Photo 1**: Tin King LRT Stop o/s Po Tin Estate. Visitors access TKLY can walk along the pavement towards western pavement of Ming Kum Road heading for Hing Fu Street via western pavement of Hing Kwai Street for TKLY.
	**Photo 2:** Po Tin Public Transport Interchange (PTI) underneath Po Tin Estate at Ming Kum Road where visitors can take bus to this PTI and then walk along Ming Kum Road, Hing Kwai St heading north for Hing Fu St for TKLY.

	**Photo 3:** Visitors can walk along the pavement of Hing Fu St heading west for Hing Fu St cul-de-sac R/A and the unnamed concrete slip road leading up to TKLY.
	**Photo 4:** Hing Fu St cul-de-sac roundabout where driven vehicles can drop-off visitors at the R/A and let them to walk up the unnamed concrete slip road for TKLY.

	**Photo 5:** The unnamed slip road linking the Hing Fu St cul-de-sac R/A with TKLY.
	**Photo 6:** Tin Kwong Lun Yee Main Entrance by the end of the unnamed concrete slip road.

	**Photo 7:** Tin Kwong Lun Yee Main Entrance Gate. It is wide enough for the access of the 24 seat shuttle bus.
	**Photo 8:** The large open area by the right hand side of columbarium blk 1 i/s TKLY where the future shuttle bus bay will be delineated.

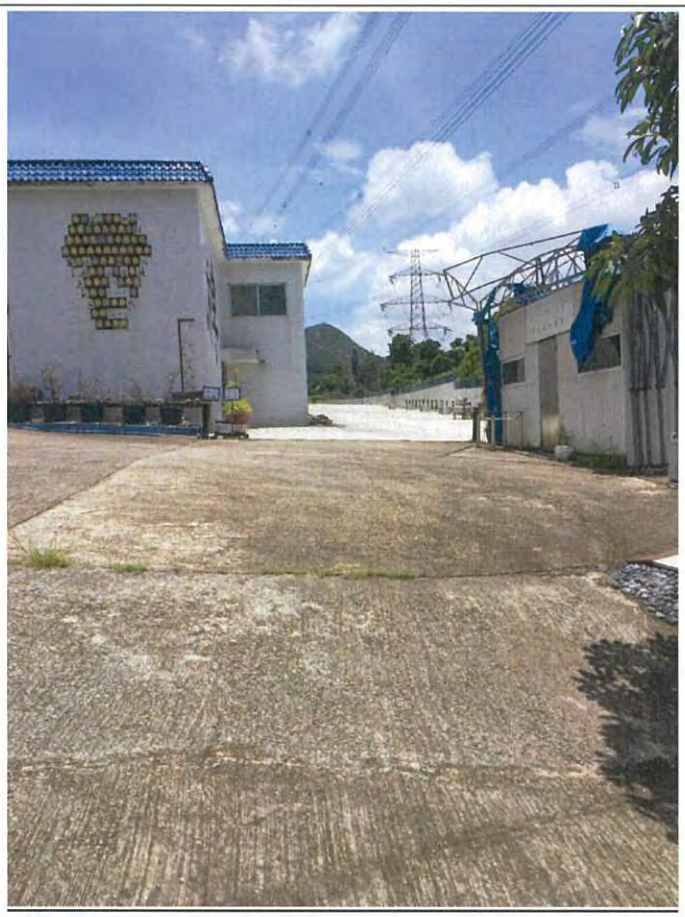
	**Photo 9:** The open area in front of the main entrance of TKLY.
	**Photo 10:** The long and wide compound in front of columbarium Blk 1 to 3 which can accommodate large number of worshippers & holding area can be set up at the compound for periodical release of worshippers into the columbarium Blks for worship.

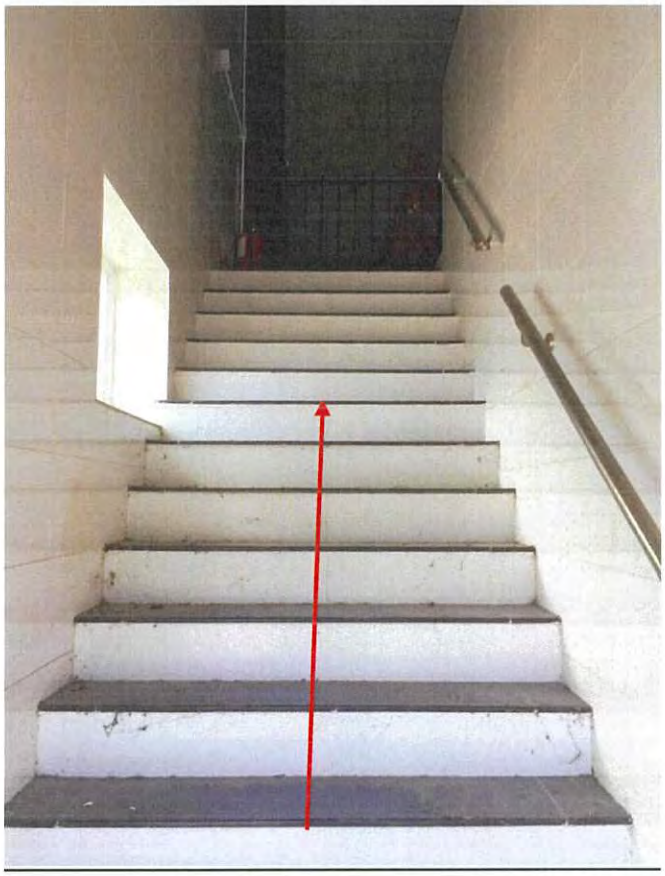
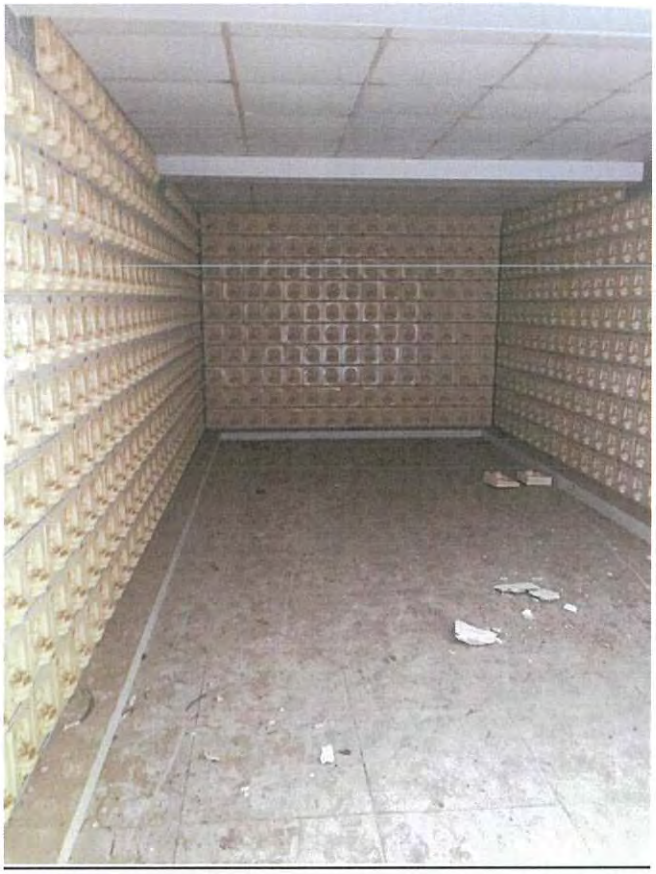
	**Photo 11:** Entrance of the G/F columbarium hall of columbarium blk 1.
	**Photo 12** Staircase leading from the G/F to the 1/F columbarium Hall of one of the Columbarium Blks. Fire extinguisher is mounted at the entrance of the Columbarium Hall.

	**Photo 13:** Exit to the rear of the Columbarium Hall with Exit Sign displayed.
	**Photo 14:** Ramp leading from the 1/F of the Columbarium Blk to the rear alley behind the Columbarium Blks where worshippers can walk along the rear alley towards south heading for the shuttle bus bay for departure. The ramps will be reconstructed as per the designed master

	layout plan made by A & B Architects.
	**Photo 15:** The internal view of one of the Columbarium Halls on the 1/F of one of the Columbarium Blks. The niche spaces will gradually be sold when columbarium licence is approved in due course.
	**Photo 16:** Fire extinguisher is placed at the entrance of the Columbarium Hall.

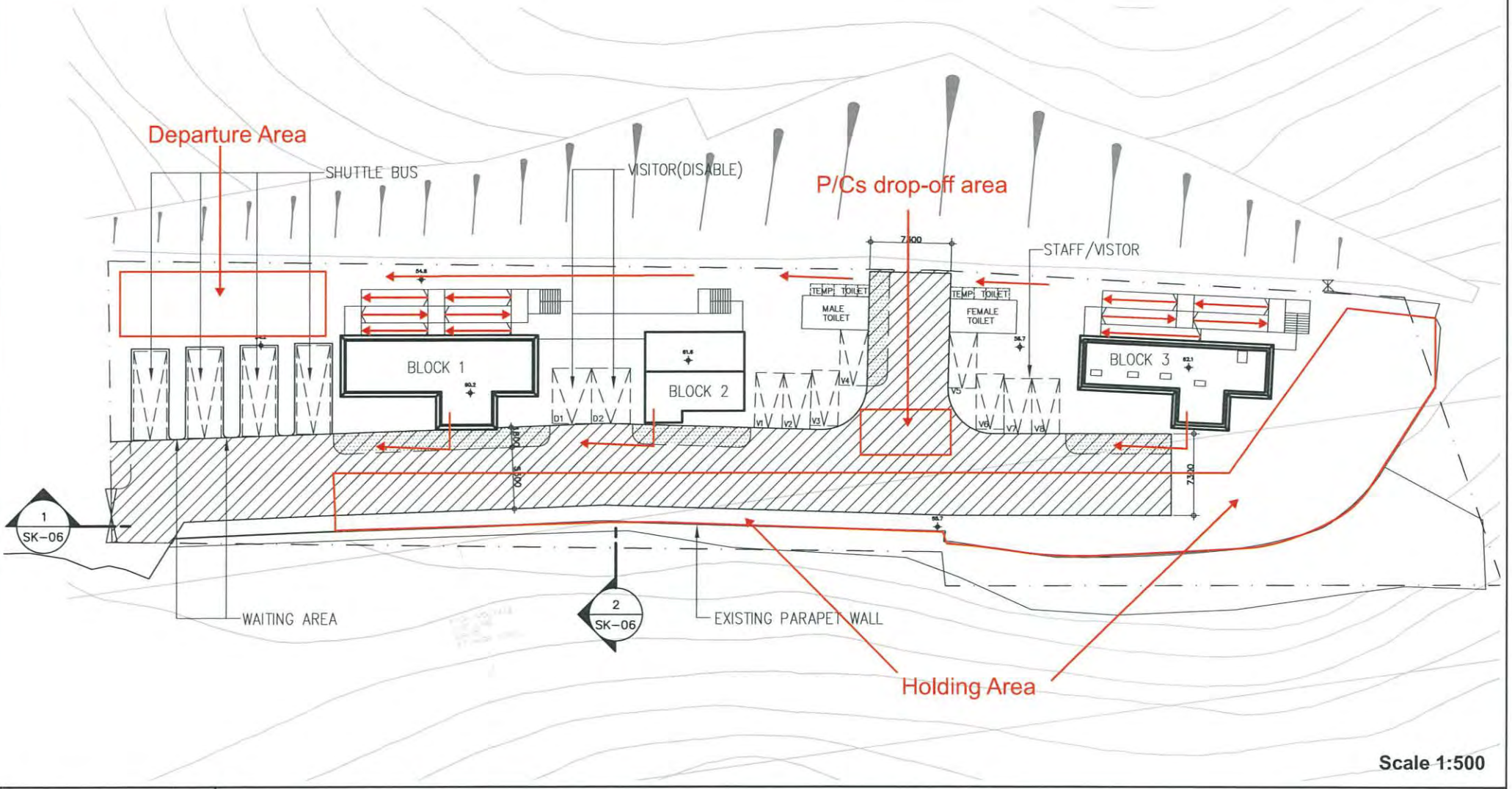
LEGEND

E.V.A

PEDESTRIAN ZONE

SITE BOUNDARY

Red lines delineated the holding area, P/Cs drop-off area & departure area behind the shuttle bus bay.



Annex F

Plan F: Proposed Holding area, P/Cs Drop-off Area & Departure Area

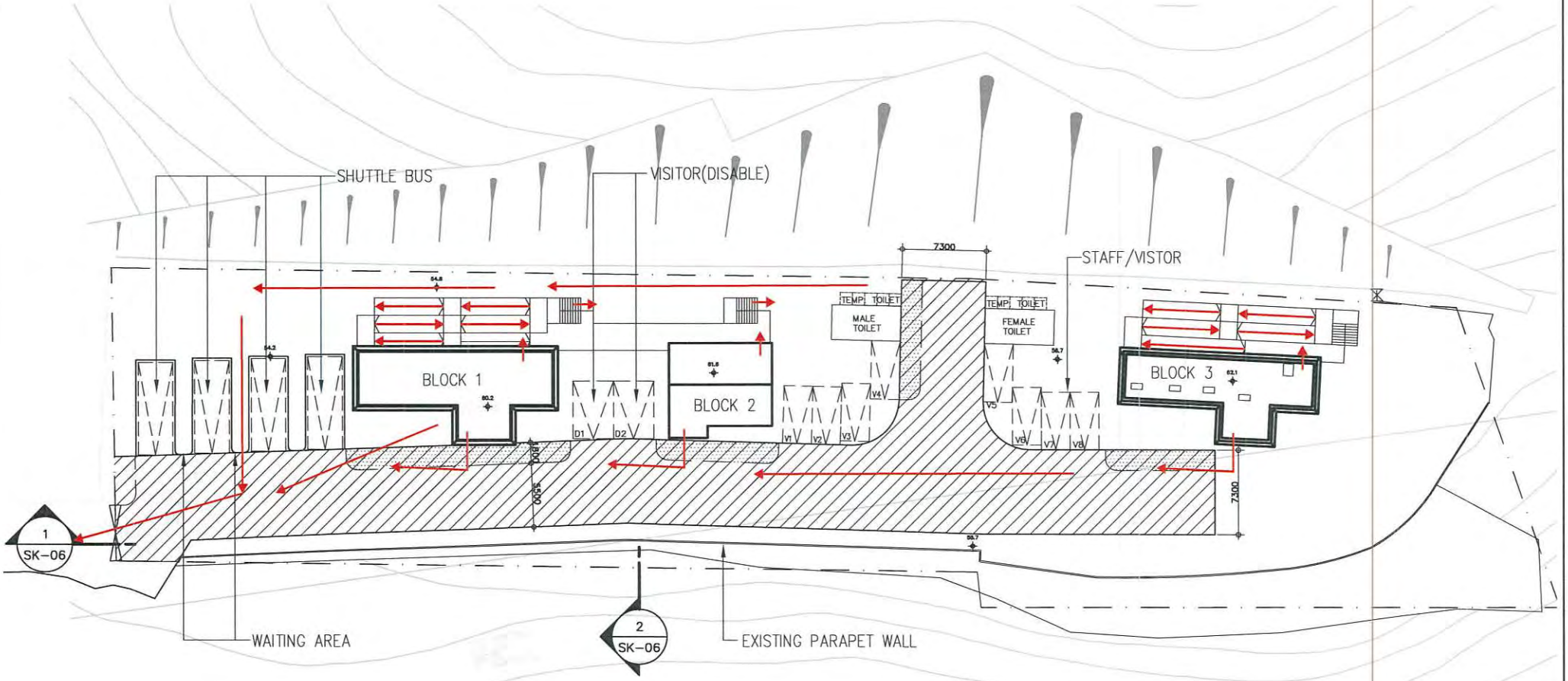
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E.V.A

PEDESTRIAN ZONE

SITE BOUNDARY

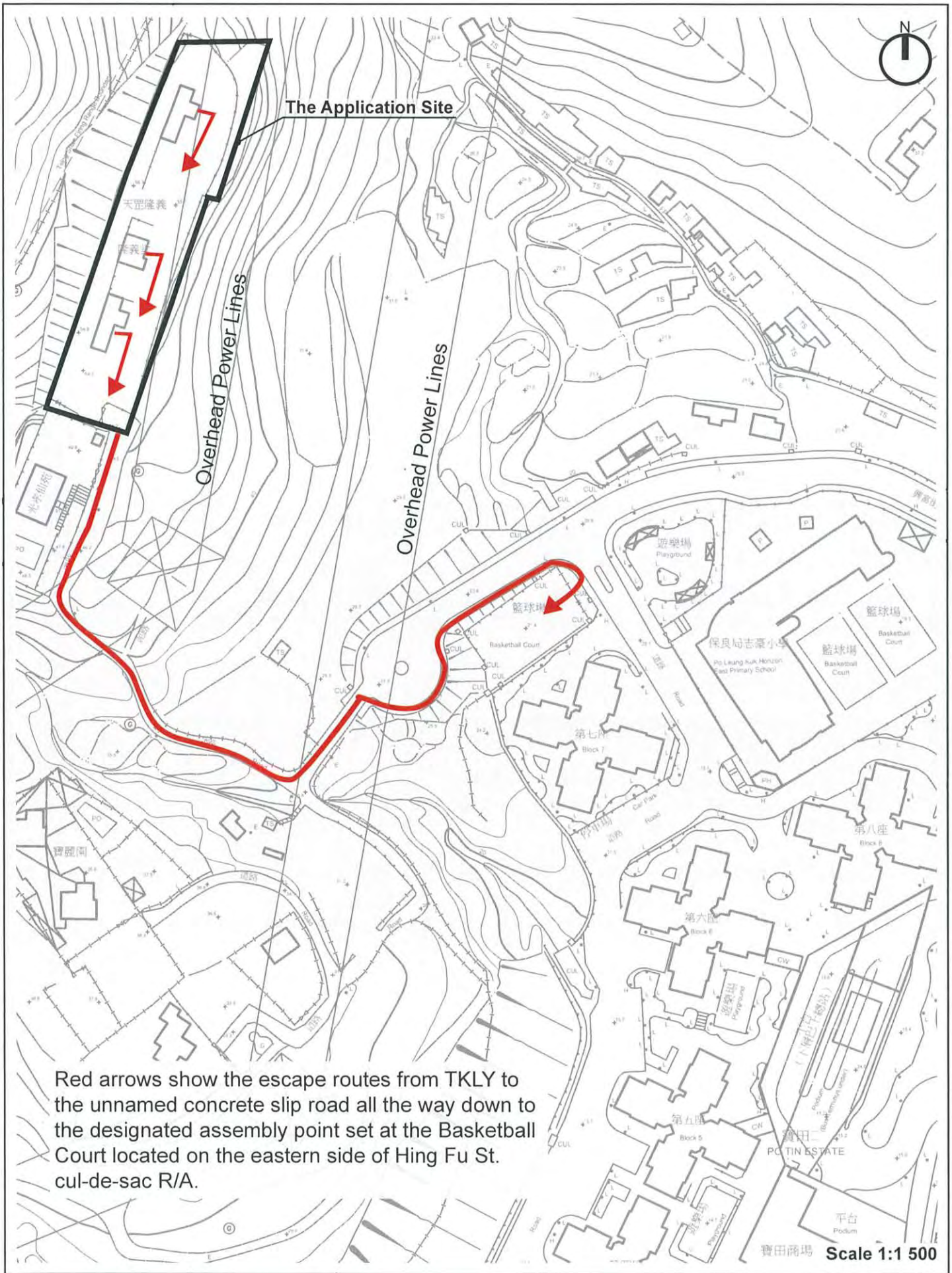
Red arrows show the direction of emergency evacuation routes i/s TKLY to the main entrance of the site.



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Annex F

Plan G: Emergency Evacuation Routes



Annex F	Plan H: Escape Routes from TKLY and the Designated Assembly Point

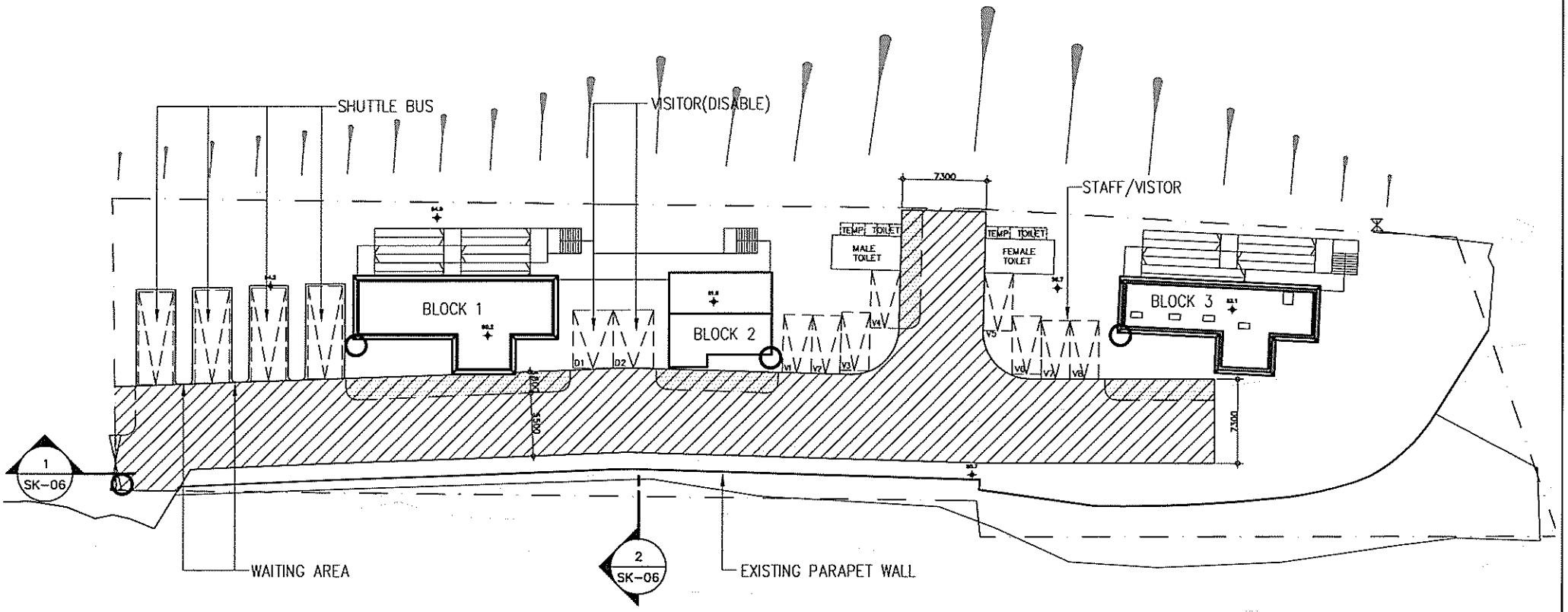
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E.V.A

PEDESTRIAN ZONE

SITE BOUNDARY

AOSC

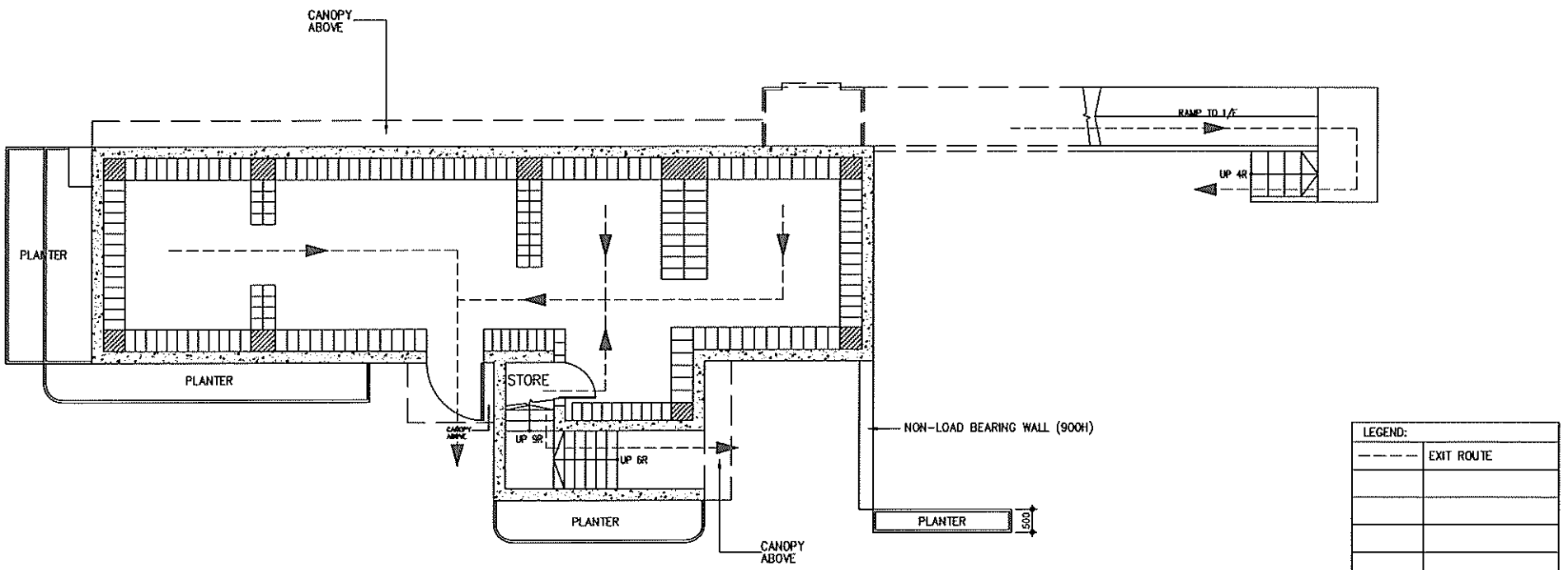


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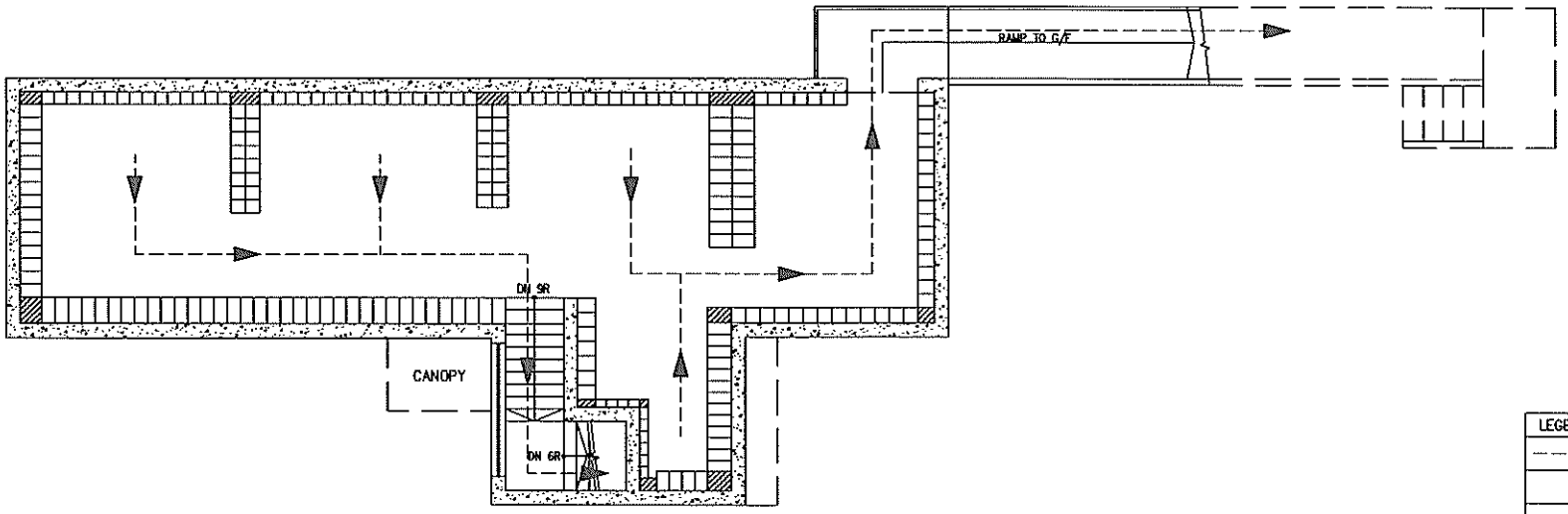
Plan I: Locations of Aerial Overhead Surveillance Cameras (AOSC)

BLOCK 1 G/F EVACUATION PLAN



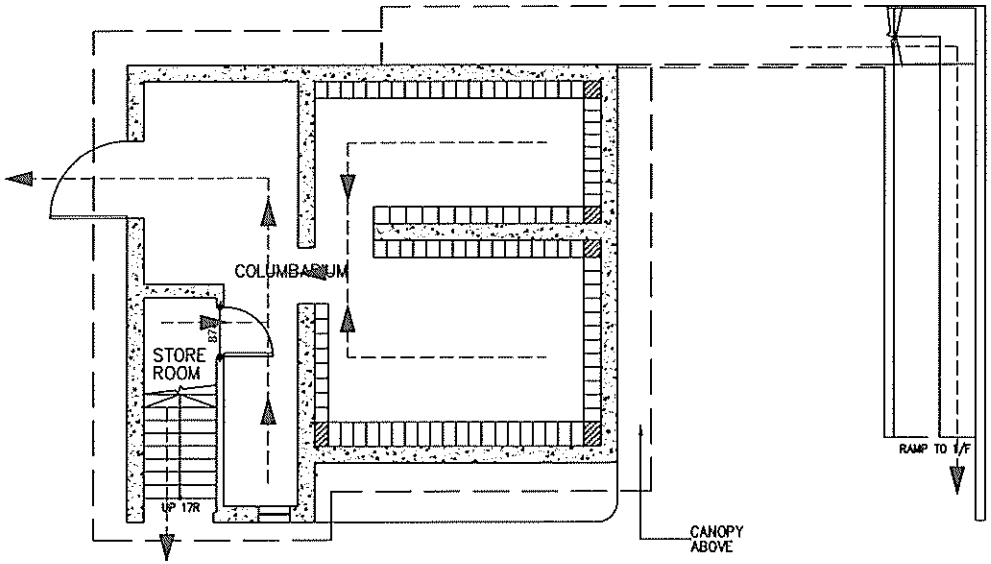
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BLOCK 1 1/F EVACUATION PLAN



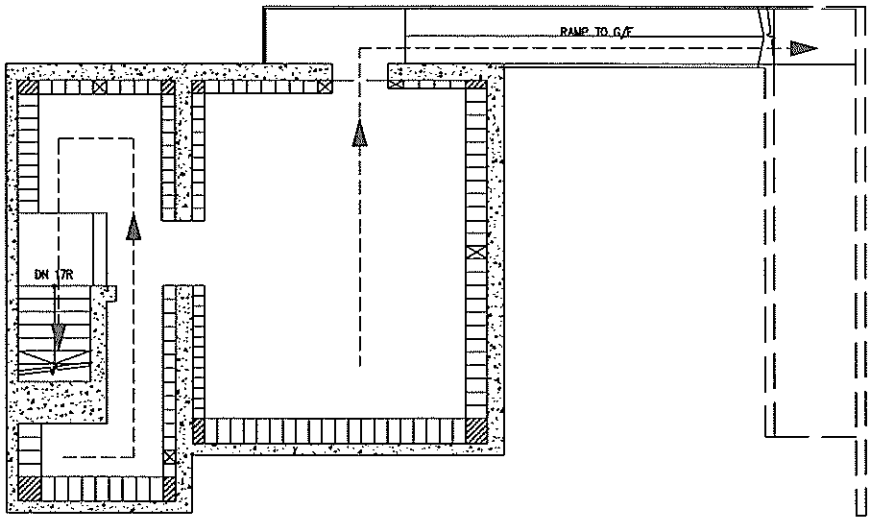
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BLOCK 2 G/F EVACUATION PLAN



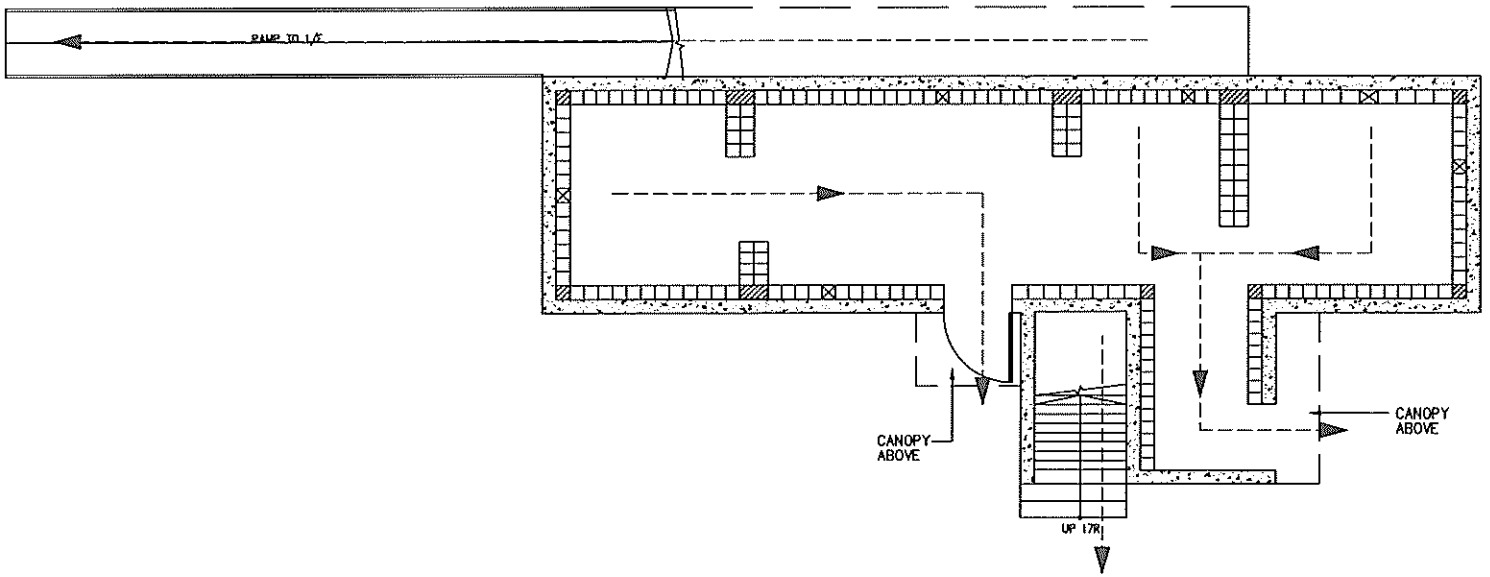
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BLOCK 2 1/F EVACUATION PLAN



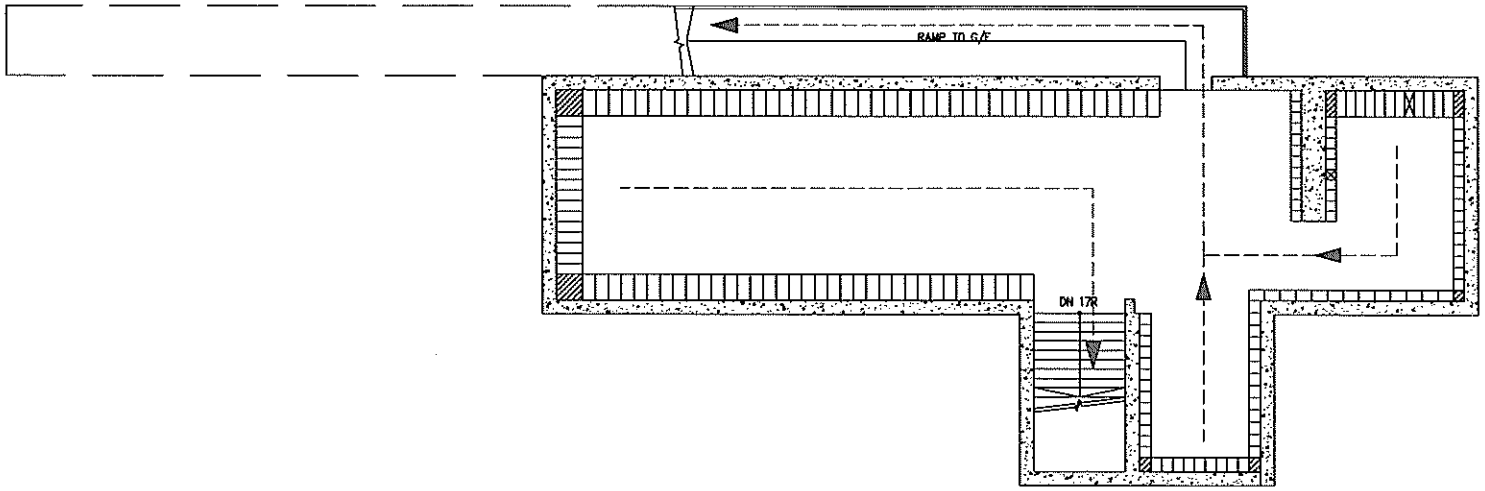
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BLOCK 3 G/F EVACUATION PLAN



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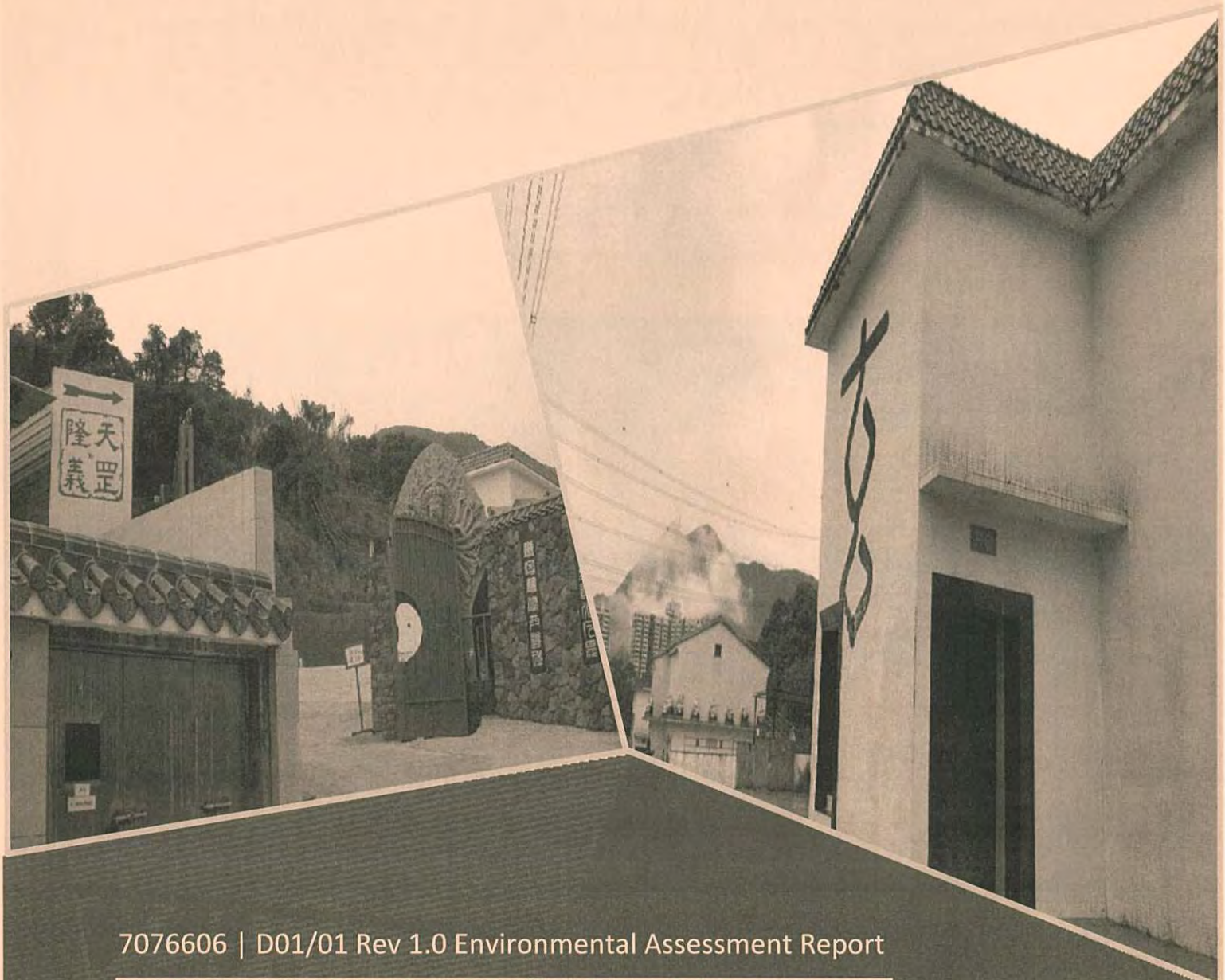
BLOCK 3 1/F EVACUATION PLAN



LEGEND:	
- - - - -	EXIT ROUTE

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7076606 | D01/01 Rev 1.0 Environmental Assessment Report

S12A Rezoning Application from "GB" to "G/IC" for a Religious Institution at Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744H and 1744I in DD 132, Tuen Mun

Prepared for Tin Kwong Lun Yee Ltd
5 June 2019

SMEC INTERNAL REF. 7076606

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1	5 June 2019	Cleo YIP	Antony WONG	Alexi BHANJA

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SMEC Asia Limited

Important Notice

This report is confidential and is provided solely for the purposes of supporting S12A Rezoning Application from "GB" to "G/IC" for a Religious Institution at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H and 1744 I in D.D. 132, Tuen Mun. This report is provided pursuant to a Consultancy Agreement between SMEC Asia Limited ("SMEC") and Tin Kwong Lun Yee Ltd, under which SMEC undertook to perform specific and limited tasks for Tin Kwong Lun Yee Ltd. This report is strictly limited to the matters stated in it and subject to the various assumptions, qualifications and limitations in it and does not apply by implication to other matters. SMEC makes no representation that the scope, assumptions, qualifications and exclusions set out in this report will be suitable or sufficient for other purposes nor that the content of the report covers all matters which you may regard as material for your purposes.

This report must be read as a whole. Any subsequent report must be read in conjunction with this report.

The report supersedes all previous draft or interim reports, whether written or presented orally, before the date of this report. This report has not and will not be updated for events or transactions occurring after the date of the report or any other matters t might have a material effect on its contents or which come to light after the date of the report. SMEC is not obliged to inform you of any such event, transaction or matter nor to update the report for anything that occurs, or of which SMEC becomes aware, after the date of this report.

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APPENDIX A SMOKELESS FURNACE CATALOGUE FROM HKPC

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1 INTRODUCTION

1.1 Background

1.1.1 SMEC Asia Limited (SMEC) has been commissioned by Tin Kwong Lun Yee Ltd (the Applicant) to conduct an Environmental Assessment (EA) to support the Planning Application under S12A of the Town Planning Ordinance (TPO), to rezone the subject site, which comprises Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D.132, Tuen Mun (the Site or the Project) from "Green Belt" ("GB") to "Government, Institution or Community" ("G/IC"). The "G/IC" zoning covers religious institution as a permitted use under column 1 on the relevant Approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35.

1.1.2 Tin Kwong Lun Yee (天罡隆義) is a branch of Vajrayana (密宗) from the Tibetan Buddhism (藏傳佛教) religion of the Taiwan stream. Tin Kwong Lun Yee is dedicated to provide training and coaching to members who wish to realise the Buddha's teaching in their daily life and to benefit all sentient beings as well. As a low-profile and newly established religion in Hong Kong, Tin Kwong Lun Yee is committed to provide social services by volunteering and offers assistance, as needed, to local social welfare organisations.

1.2 Site Description

1.2.1 The Site is located at the upper part of the Kwong Shan Tsuen and north-west of Po Tin Estate in Tuen Mun, as illustrated on ***Figure 1.1***. The Site occupies an area of 3,137m^2. The Site was vacant before 1960. Three existing 2-storey villas occupy the Site and the building licence for these buildings was issued in 1960. The site was used for residential purposes until 1990s. In 2008, the Site was acquired by Tin Kwong Lun Yee and the abandoned villas were renovated for its use. The Site is accessible from an existing, paved access road connected to Hing Fu Street.

1.3 Project Description

1.3.1 ***Figure 1.2*** presents a Master Layout Plan of the Project. As illustrated, the Project comprises the following facilities:

- One columbarium blocks (Block 1);
- One building block for columbarium, toilet, management office and storage (Block 2);
- One building block for religious and columbarium use (Block 3);
- A car parking area; and
- Landscape areas, pedestrian areas and access roads.

1.3.2 No major building construction or demolition works will be required for the Project since its buildings and structures are already in place.

1.3.3 Totally 11,094 niches will be provided for the Project and 936 niches of which were sold on or before 30 June 2017 to satisfy the genuine need of columbarium supply in Hong Kong.

1.3.4 It is envisaged that these additional columbarium facilities can be accommodated within the existing building structures, including the religious hall and management office.

1.3.5 The operating hours of Tin Kwong Lun Yee are from 10am to 5pm during non-festival periods, and from 9am to 6pm during festival periods – these include the Ching Ming Festival and the Chung Yeung Festival.

1.3.6 A site visit was carried on 22 June 2018. Approximately 5 to 10 minutes on foot are required to reach the Site from Hing Fu Street. As advised by the Applicant, it is unlikely that a large number of visitors will come to the Site during non-festival periods, while advance booking is required by the Applicant during festival periods to control visitor number.

1.3.7 As advised by the Applicant, not more than five 28-seat shuttle buses will be provided for the visitors between 8am and 6pm during festival periods. Advance reservation for the shuttle bus services will be required. No other vehicles except emergency vehicles and no other visitors apart from those who will have made the reservation in advance will be allowed to enter the Site during festival periods.

1.3.8 During non-festival periods, not more than 48 visitors per day are expected to visit the Site. Therefore, no advance reservation and shuttle bus service, as well as traffic control will be necessary.

1.3.9 There may be religious activities carried out by worshippers during non-festival periods.

1.4 Objective of this Report

1.4.1 This EA study has been undertaken to demonstrate the environmental acceptability of the Project.

1.4.2 Mitigation measures have been recommended, where appropriate, to alleviate any identified environmental impacts or constraints during the operation of the Project. Potential environmental impacts during the construction phase, thought transient, have also been reviewed and mitigation measures have been recommended to reduce any identified environmental impacts to acceptable levels.

Figure 1.1: Site Location and its Environs

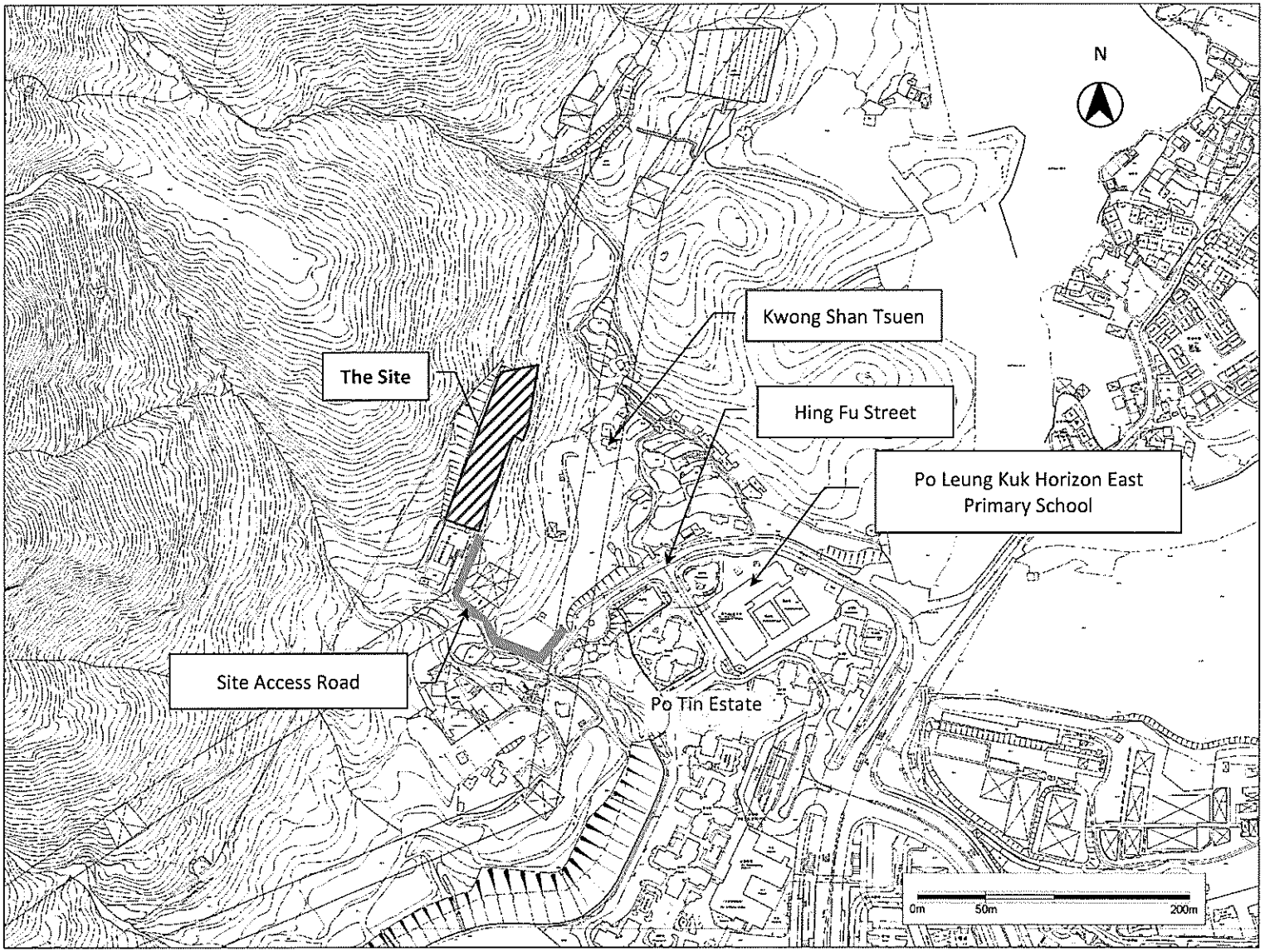
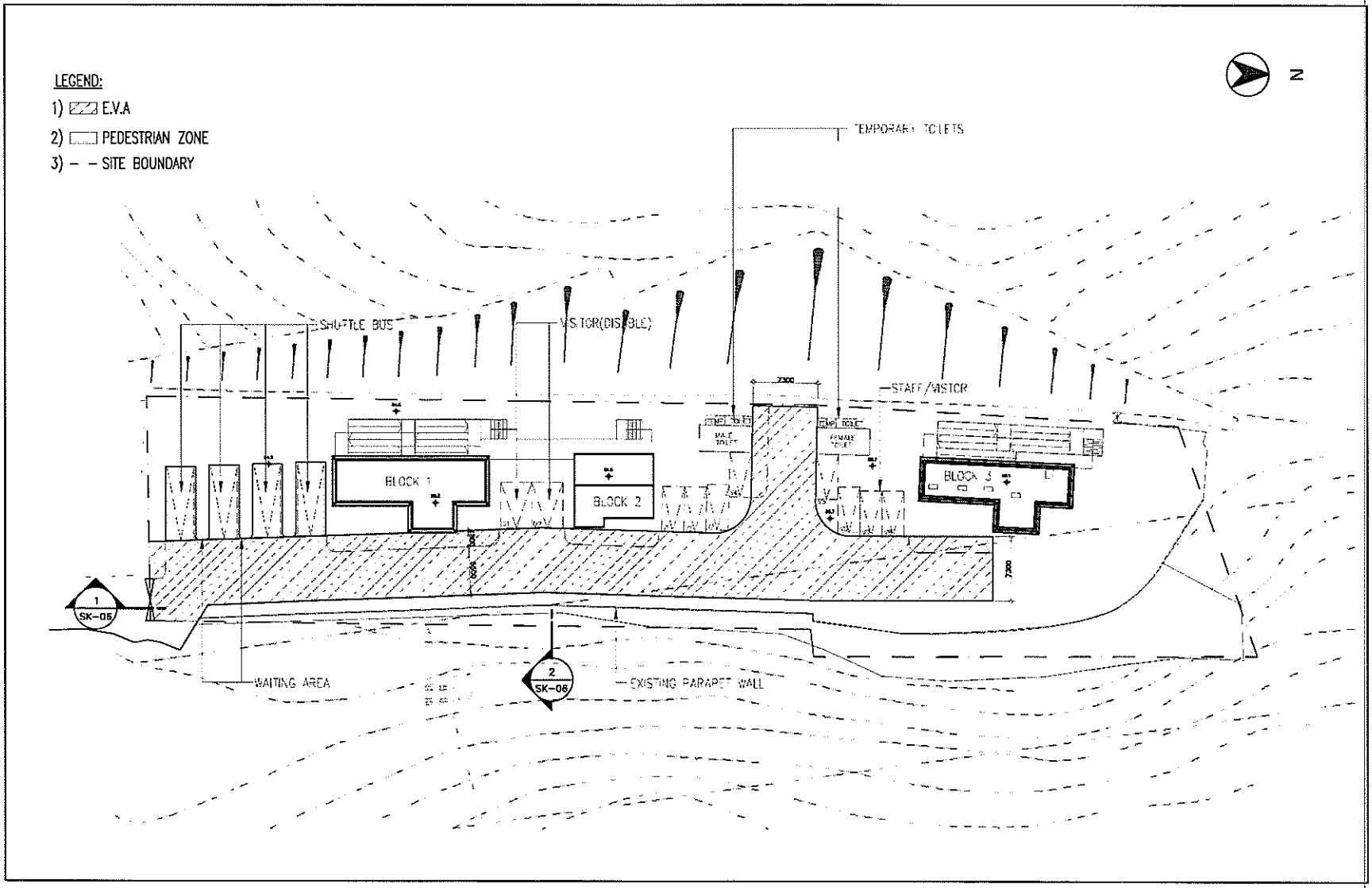


Figure 1.2: Master Layout Plan of the Project



2 AIR QUALITY REVIEW

2.1 Introduction

2.1.1 This section assesses the potential air quality impacts associated with the Project during minor renovation and continued operation of Tin Kwong Lun Yee. Mitigation measures are recommended, where necessary, as part of the assessment.

2.2 Environmental Legislation and Standards

Air Quality Objectives

2.2.1 The Air Quality Objectives (AQOs) established under the *Air Pollution Control Ordinance* (APCO) (Cap. 311) are given in ***Table 2.1*** below.

Table 2.1: Hong Kong Air Quality Objectives

Pollutant	Averaging Time	Concentration Limit [Note 1], µg/m3	No. of Exceedance Allowed
Sulphur Dioxide (SO_2)	10-minutes	500	3
	24-hour	125	3
Respirable Suspended Particulates (PM_{10})[Note 2]	24-hour	100	9
	Annual	50	Not applicable
Fine Suspended Particulates ($PM_{2.5}$)[Note 3]	24-hour	75	9
	Annual	35	Not applicable
Nitrogen Dioxide (NO_2)	1-hour	200	18
	Annual	40	Not applicable
Ozone (O_3)	8-hour	160	9
Carbon Monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
Lead (Pb)	Annual	0.5	Not applicable

Notes:

1. All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.
2. Respirable suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.
3. Fine suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

Air Pollution Control (Construction Dust) Regulation

2.2.2 Enacted under Section 43 of the APCO, the *Air Pollution Control (Construction Dust) Regulation* defines notifiable and regulatory works for achieving the purpose of dust control for a number of activities.

2.2.3 The Regulation requires that any notifiable work[Ref. #1] shall give advance notice to the Environmental Protection Department (EPD), and the contractor shall ensure that the notifiable and regulatory works are carried out in accordance with the Schedule of the Regulation. Dust control and suppression measures are also provided in the Schedule.

2.2.4 No construction works including notifiable work will be carried out for the Project. Notwithstanding, other relevant dust control measures of the Air Pollution Control (Construction Dust) Regulation should be followed as far as practicable.

Air Pollution Control (Furnaces, Ovens and Chimneys) (Installation and Alteration) Regulations

2.2.5 Enacted under Section 43 of the APCO, the *Air Pollution Control (Furnaces, Ovens and Chimneys) (Installation and Alteration) Regulations* stipulate that a prior approval from EPD will be required if the total fuel consumption capacity of any fuel-burning equipment or its chimney on premises to be installed or altered exceeds (a) 25 litres (L) of conventional liquid fuel per hour; or (b) 35 kilograms (kg) of conventional solid fuel per hour; or (c) 1,150 megajoules (MJ) of any gaseous fuel per hour.

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

2.2.6 This Regulation takes effect on 1 June 2015 and requires Non-road Mobile Machinery (NRMM), except those exempted, to comply with the prescribed emission standards. From 1 September 2015, all regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Starting from 1 December 2015, only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites, container terminals and back up facilities, restricted areas of the airport, designated waste disposal facilities and specified processes.

Hong Kong Planning Standards and Guidelines (HKPSG)

2.2.7 The minimum buffer distances required between the relevant class of roads and active open spaces are recommended in Chapter 9 of the Environment of *Hong Kong Planning Standards and Guidelines* (HKPSG). The relevant buffer distances of HKPSG are summarised in ***Table 2.2*** for ease of reference.

Table 2.2: HKPSG Minimum Setback Distances

POLLUTANT	TYPE OF ROAD	BUFFER DISTANCE	PERMITTED USES
Road and Highways	Trunk Road and Primary Distributor	>20m	Active and passive recreation use
		3 – 20m	Passive recreational use
		<3m	Amenity areas
	District Distributor	>10m	Active and passive recreational use
		<10m	Passive recreational uses
	Local Distributor	>5m	Active and passive recreational use
		<5m	Passive recreational use
	Under Flyovers	-	Passive recreational use

Source: Adapted from Table 3.1 of Chapter 9 Environment of HKPSG.

1. Notifiable works include site formation, reclamation, demolition of a building, work carried out in any part of a tunnel that is within 100m of any exit to the open air, construction of the foundation of a building, construction of the superstructure of a building and road construction work.

2.3 Background Air Quality

2.3.1 The Site is surrounded by hillsides, trees, graves, temples, power pylon and overhead power line. Hing Fu Street and Hing Kwai Street are located to its east. No chimneys were identified within 500m of the Site during the visit conducted on 22 June 2018.

2.3.2 Hing Fu Street and Hing Kwai Street are the major public roads closest to the Site. They are located more than 118m and 330m from the Site respectively which are well within the buffer distances recommended in HKPSG.

2.3.3 Given the above, there are no major off-site/cumulative sources of air pollution in the background concentrations at the surrounding of the Site.

2.4 Assessment and Mitigation

Identification of Air Sensitive Receivers (ASRs)

2.4.1 Based on the Site visit conducted on 22 June 2018 and the information on the survey map, three representative Air Sensitive Receivers (ASRs) within an Air Quality Study Area of 500m from the Site boundary are identified, which are listed in ***Table 2.3*** and shown on ***Figure 2.1***.

Table 2.3: Representative ASRs

ASR NO.	DESCRIPTION	LAND USE	GROUND LEVEL (mPD)	APPROX. SHORTEST DISTANCE TO SITE BOUNDARY (m)
ASR1	Kwong Shan Tsuen	Residential	33.4	60
ASR2	Block 7 of Po Tin Estate	Residential	24.2	145
ASR3	Po Leung Kuk Horizon East Primary School	Institutional	20.1	180

Construction Phase

2.4.2 No major building construction or demolition works will be required for the Project since the buildings and structures that comprise the Project are already in place.

2.4.3 Dust control measures and good practice for controlling fugitive impacts will be implemented in accordance with the *Air Pollution Control (Construction Dust) Regulation*. Significant fugitive dust emission during the minor renovation works is not anticipated with proper implementation of dust control measures listed below:

- Works area for site clearance shall be sprayed with water before, during and after the operation so as to maintain the entire surface wet.
- Restricting heights from which materials are to be dropped, as far as practicable to minimise the fugitive dust arising from unloading/loading.
- Covering or water spraying Construction and Demolition (C&D) wastes generated from demolition by tarpaulin sheet should be provided for prevention of dust generation.
- Any stockpile of dusty materials shall be covered entirely by impervious sheeting; and/or placed in an area sheltered on the top and four sides.
- All dusty materials shall be sprayed with water immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.
- Regular maintenance of any plant and equipment shall be provided to minimise gaseous emissions.

2.4.4 The construction contractors shall also provide regular maintenance of any plant and equipment so as to minimise gaseous emissions.

2.4.5 With proper dust control measures as described above, significant fugitive dust impacts during the renovation phase are not anticipated.

Continued Operation

2.4.6 The potential air quality concerns that may arise during the operational phase of the Project include air emissions from vehicles and incense burners/joss paper burners.

Vehicle Emissions

2.4.7 ***Table 2-4*** summarises the road types and ***Figure 2.1*** shows their distances from the Site.

Table 2-4: Types of Roads Surrounding the Site

ROAD NAME	ROAD TYPE	HKPSG BUFFER DISTANCE (m)	DISTANCE FROM SITE BOUNDARY (m)
Hing Fu Street	Local Road	5	118
Hing Kwai Street	Local Road	5	330

2.4.8 As mentioned in ***paragraph 1.3.7***, shuttle buses will be provided between 8am and 6pm during festival periods. Only the visitors who will make reservation will be allowed to visit the Site via the shuttle buses. In order to have traffic control, not more than five shuttle buses per hour will be provided during festival periods.

2.4.9 As mentioned in ***paragraph 1.3.8***, no more than 10 visitors will visit the Site during non-festival periods as the Applicant advised. Therefore, limited vehicles will access the Site and no adverse air quality impact due to traffic emission is anticipated.

Emissions from Other Sources

2.4.10 As advised by the Applicant, visitors are not allowed to burn joss paper within the Site. In order to minimise adverse environmental impact during Ching Ming and Chung Yeung Festivals, offerings of water, flowers or fruit are encouraged.

2.4.11 Should joss paper burning be allowed in the future, then a smokeless joss paper furnace with high dust and smoke removal efficiency will be purchased, such as "Ching Yan"Eco-Furnace from the Hong Kong Productivity Council (HKPC) (see ***Appendix A***) for other equipment no less efficient from an equivalent supplier.

2.4.12 The Applicant is committed to follow the good operation practice and administrative measures recommended in Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places published by EPD. This includes:

- Encourage visitors to adopt green worship, e.g. flower worshipping and fruit worshipping, etc.
- Try to arrange off-site burning as far as practicable, which the off-site burning facilities should be remote from air sensitive receivers with provision of proper joss paper furnaces and effective air pollution control equipment.
- If the above two items are not practicable and on-side joss paper burning is inevitable, the Applicant shall provide joss paper furnaces and effective air pollution control equipment to achieve no visible emissions and no environmental nuisance to achieve no visible emissions and no environmental nuisance are identified to nearby ASRs. Also, the following measures shall be provided and implemented:
  - Provide trained staff to operate the smokeless furnaces and prohibit visitors/ other people from operating the furnaces
  - Ensure that the air pollution control equipment on the furnaces has been turned on prior to use and is operating properly
  - Allow smokeless joss paper furnaces for use in memorial ceremonies upon request only

- Prohibit joss paper burning without the use of the smokeless joss paper furnaces
- Prohibit other usage of the smokeless joss paper furnaces
- Advise and encourage visitors to burn joss paper to be provided by the Applicant so as to control the quantity and quality of burning materials
- Provide guidance to visitors on minimising the quantity of burning materials and removing non-paper materials (such as plastic wrapping) before burning

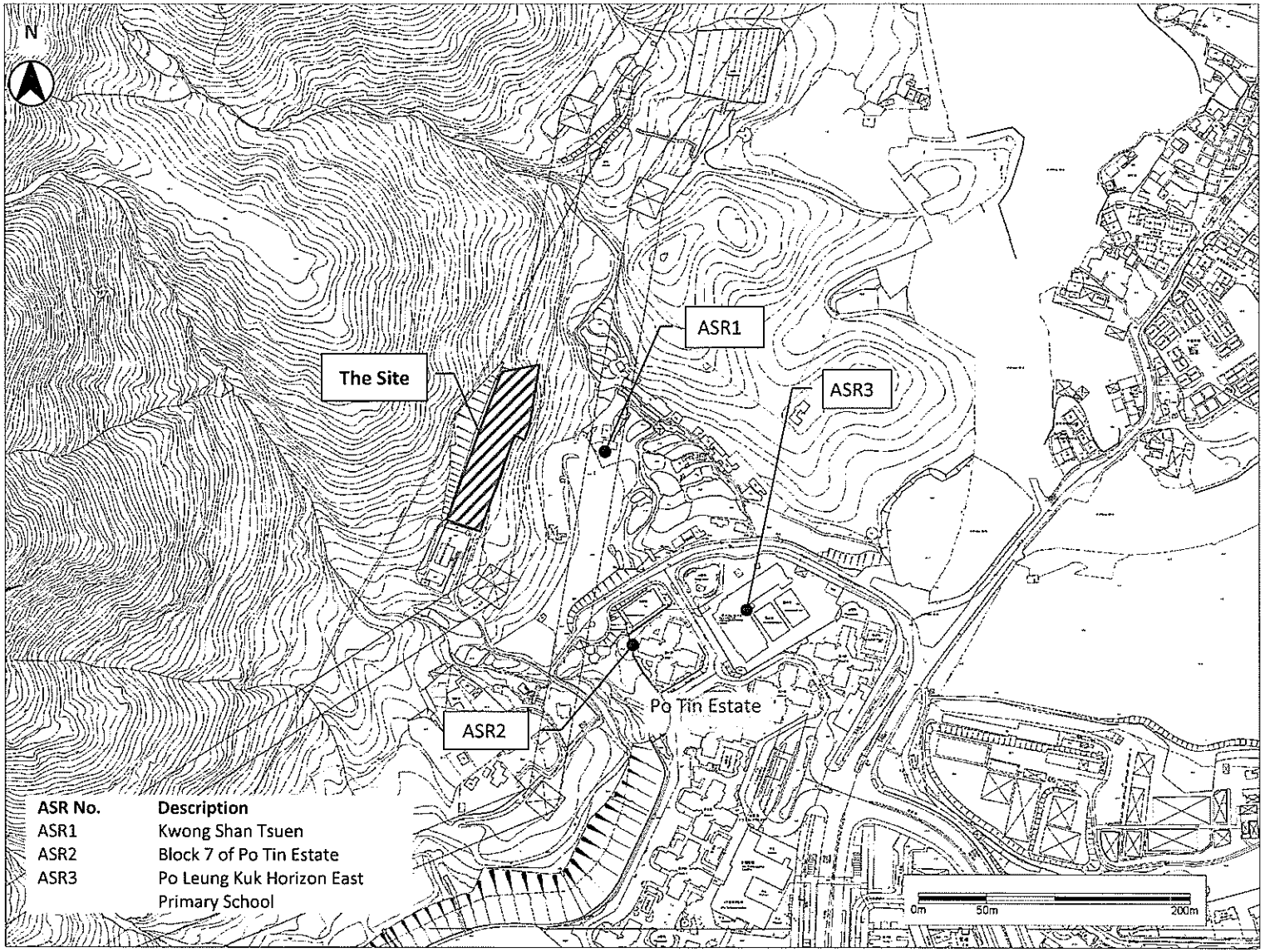
2.5 Conclusions

2.5.1 The contractor for the minor construction works shall implement dust control measures in accordance with the requirements of the *Air Pollution Control (Construction Dust) Regulation*. The construction contractor shall also provide regular maintenance of all the plants and equipment so as to minimise gaseous emissions. With the implementation of these mitigation measures, there should be no adverse air quality impacts during the construction phase of the Project.

2.5.2 During operation, there will be insignificant emissions from vehicles transporting visitors to the Site. On-site joss paper burning is currently not allowed, but if the Applicant considers allowing this in the future, then smokeless joss paper furnaces with dust control measures shall be installed and the recommendations in EPD's *Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places* shall be followed. Therefore, no adverse air quality impact is anticipated during the operation phase of the Project.

2.5.3 Overall, therefore, no adverse air quality impact from the minor works or from the continued operation of Tin Kwong Lun Yee is anticipated.

Figure 2.1: Location of Representative ASRs



3 NOISE

3.1 Introduction

3.1.1 This section assesses the potential noise impacts generated by the Project during minor renovation and continued operation of Tin Kwong Lun Yee. Mitigation measures are recommended as part of the assessment, where necessary.

3.2 Environmental Legislation and Standards

Noise Control Ordinance (Cap. 400)

3.2.1 The main piece of legislation controlling environmental noise impact is the *Noise Control Ordinance* (NCO). The NCO enables regulations and Technical Memoranda (TMs) to be enacted, which introduce detailed control criteria, measurement procedures and other technical matters. Environmental noise is governed under the following TMs:

- Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM)
- Technical Memorandum on Noise from Percussive Piling (PP-TM)
- Technical Memorandum on Noise from Construction Work in Designated Areas (DA-TM)
- Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites (IND-TM)

3.2.2 According to EPD's Plan No. EPD/AN/NT-03 for Tuen Mun, Sham Tseng and Ma Wan, the Site is entirely located outside a Designated Area (DA) and so the DA-TM is not applicable.

3.2.3 A Construction Noise Permit (CNP) must be obtained by the contractor for any percussive piling at any time. CNP must also be obtained for the use of any Powered Mechanical Equipment (PME) within restricted hours as defined in the NCO (for all days 7pm to 7am the next day and at all times on general holidays or Sundays).

3.2.4 In addition to a CNP, hand-held breakers having a mass of above 10kg and any air compressor capable of supplying compressed air at 500kPa or above for carrying out construction work must be fitted with a Noise Emission Label (NEL) issued under the *Noise Control (Hand-held Percussive Breakers) Regulation* and the *Noise Control (Air Compressors) Regulation* of the NCO.

3.2.5 There is no statutory control for noise arising from construction activities (other than percussive pilling) during normal working hours (7am to 7pm from Monday to Saturday, not including general holidays). Nevertheless, *Professional Persons Environmental Consultative Committee (ProPECC) Practice Note PN2/93 Noise from Construction Activities – Non-statutory Controls* (ProPECC PN2/93) recommends the noise criteria as shown in ***Table 3.1*** and guideline to minimise the potential construction noise impact during normal working hours.

Table 3.1: Construction Noise Criteria for Non-Restricted Hours

NOISE SENSITIVE USE	$L_{eq(30min)}$ NOISE CRITERIA BETWEEN 0700 AND 1900 ON ANY DAY NOT BEING A SUNDAY OR GENERAL HOLIDAY
Dwellings	75 dB(A)
School	70 dB(A) (or 65 dB(A) during examination)

3.2.6 For fixed plant noise during operation phase, the requirements of IND-TM shall be complied with. Table 2 of IND-TM stipulates the day, evening and night time Acceptable Noise Levels (ANLs) for Noise Sensitive Receivers (NSRs) according to the corresponding Area Sensitive Rating (ASR), which is determined by Influencing Factors (IFs) in accordance with the IND-TM. These are summarised in ***Table 3.2***.

Table 3.2: Acceptable Noise Levels for Fixed Noise Source

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

Hong Kong Planning Standards & Guidelines (HKPSG)

3.2.7 As recommended in Table 4.1 of Chapter 9 Environment of HKPSG, the standards for road traffic noise in terms of $L_{10\ (1\text{-}hr)}$ of the following uses relying on opened windows for ventilation are:

- 70 dB(A) for all domestic premises including temporary housing accommodation (residential); hotels and hostels; and offices.
- 65 dB(A) for educational institutions, including kindergartens, child care centres and all others where unaided voice communication is required (school); places of public worship; and courts of law.
- 55 dB(A) for hospitals, clinics, convalescence homes; and residential care homes for the elderly.

3.2.8 The Site is located in a rural area and, similar to other noise sensitive uses within this area, it is not subject to any major noise sources. Nevertheless, the requirements of Table 4.1 of Chapter 9 of HKPSG shall be followed:

(a) 5 dB(A) below the appropriate Acceptable Noise Levels (ANLs) shown in Table 2 of TM-IND, and
(b) the prevailing background noise levels.

3.3 Assessment and Mitigation

Identification of Noise Sensitive Receivers (NSRs)

3.3.1 Based on the Site observations on 22 June 2018 and the information on the survey map, representative Noise Sensitive Receivers (NSRs) within a Noise Study Area of 300m from the boundary of the Site are listed in ***Table 3.3*** and shown on ***Figure 3.1***.

Table 3.3: Representative NSRs

NSR NO.	DESCRIPTION	LAND USE	GROUND LEVEL (mPD)	APPROX. SHORTEST DISTANCE TO SITE BOUNDARY (m)
NSR1	Kwong Shan Tsuen	Residential	33.4	60
NSR2	Block 7 of Po Tin Estate	Residential	24.2	145
NSR3	Po Leung Kuk Horizon East Primary School	Institutional	20.1	180

3.3.2 The majority of representative NSRs identified are quite distant from the Site, although the closest is NSR 1, which is more than 60m from the Site boundary. The Site itself is remote and not subject to any major noise sources.

Renovation

3.3.3 No major construction work or demolition works will be required for the Project since the buildings and structures that comprise the Project are already in place.

3.3.4 The Contractor shall use quiet plant as far as practicable and implement good site practices in order to minimise construction noise emissions. Typical noise mitigation measures are summarised below:

- Only well-maintained plant should be operated on site;
- Plant should be turned off or throttled down when not in use;
- Plant that is known to emit noise more dominant in one direction should be oriented to avoid that noisy side of the plant facing to NSRs;
- Silencers, mufflers and enclosures should be installed to plants if needed and maintained adequately throughout the works;

3.3.5 With implementation of noise mitigation measures, adverse noise impact is not anticipated during the renovation works.

Continued Operation

3.3.6 The operating hours of the Project will be from 1000 to 1700 during non-festival periods and from 0800 to 1800 during festival periods. Sources of potential noise impacts during the operation of the development include the operation of building services equipment (BS) special religious ceremonies/activities.

Operation of Building Services (BS) Equipment

3.3.7 Only split-type air conditioners are currently installed, from which the noise impact is negligible. In addition, these are fully screened from NSRs by building structures within the Site and the surrounding topography. Therefore, the noise impact will be minimal.

Religious Ceremonies/Activities

3.3.8 As the Site will be used for peaceful, quiet contemplation and only small scale of religious ceremonies/activities would be allowed to be carried out inside building structure during non-festival periods upon request, no adverse noise impact on the nearby NSRs is anticipated.

Traffic Noise Impacts

3.3.9 Noise impact due to vehicular access to the Site is negligible during non-festival periods due to the minimal number of visitors.

3.3.10 Only four bus trips of 28-seat shuttle buses per hour will be provided during festival periods, which will not significantly increase the traffic flow. Therefore, significant traffic noise impact on the surrounding noise sensitive receivers is not anticipated.

3.3.11 Overall, therefore, no adverse traffic noise impact to the Site from the nearby public road is anticipated.

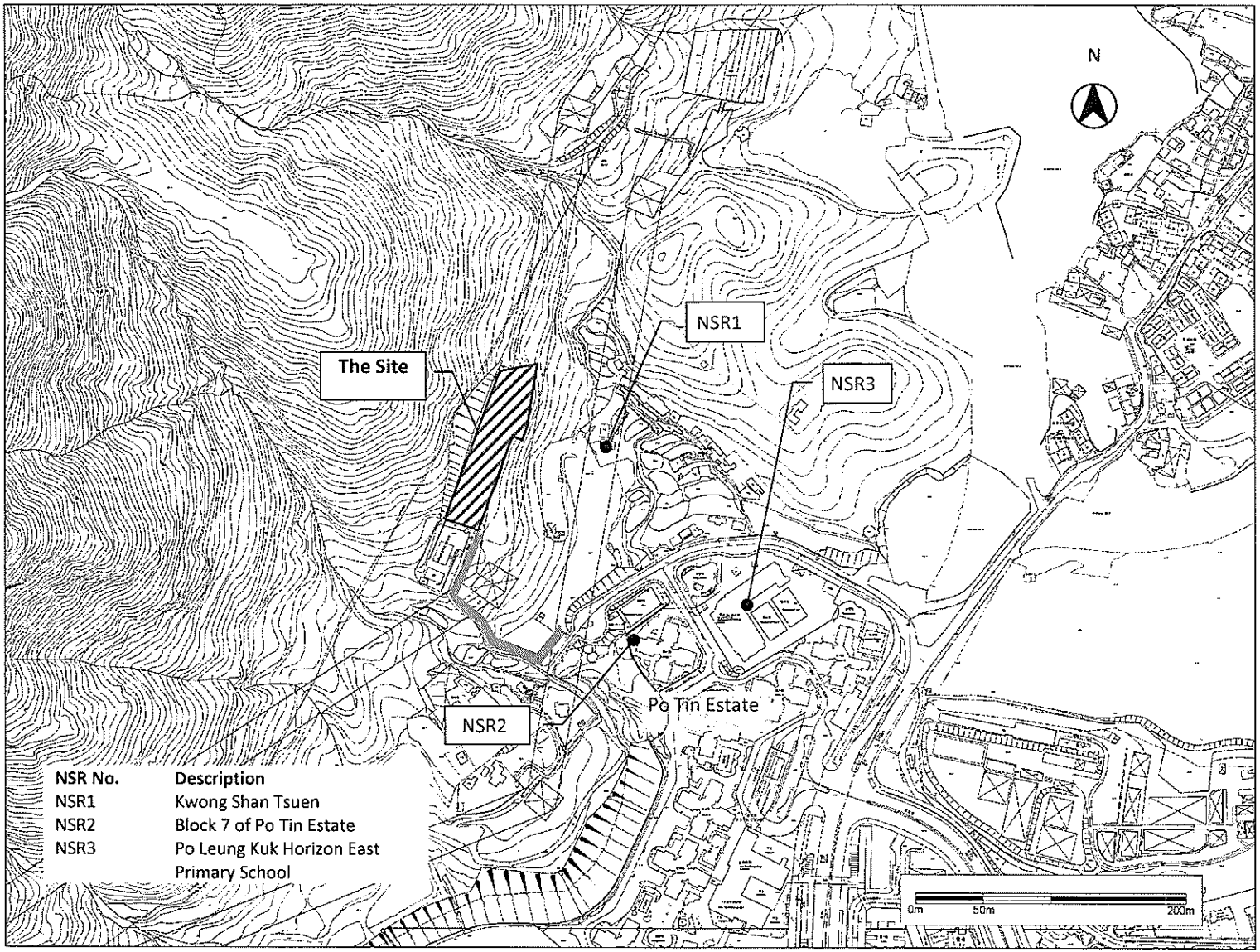
3.4 Conclusions

3.4.1 Significant off-site noise impacts are not anticipated. Nevertheless, mitigation measures and good site practices will be implemented as far as practicable in accordance with ProPECC PN2/93. Therefore, no adverse noise impact is anticipated during the renovation phase of the Project.

3.4.2 During continued operation of Tin Kwong Lun Yee, no adverse traffic noise impacts are anticipated. Operational noise from BS equipment, such as split-type air conditioners, will not be significant and the noise impact to off-site NSRs will be minimal.

3.4.3 Overall, therefore, no adverse noise impact from the minor renovation works or from the continued operation of the Project is anticipated.

Figure 3.1 Location of Representative NSRs



4 WATER QUALITY

4.1 Introduction

4.1.1 This section addresses the potential water quality impacts arising from the Project during minor renovation and continued operation of Tin Kwong Lun Yee. Mitigation measures are recommended, where necessary, as part of the assessment.

4.2 Environmental Legislation and Standards

Water Pollution Control Ordinance (Cap. 358)

4.2.1 An amendment to the *Water Pollution Control Ordinance* (WPCO) was enacted in 1990 and provides a mechanism for setting effluent standards. These are included in the *Technical Memorandum Standards for Effluents Discharged in to Drainage and Sewerage Systems, Inland and Coastal Waters (WPCO Cap 358, S.21)*. All discharges into government sewerage systems, storm water drainage systems, marine and inland waters are required to comply with the standards stipulated in the Technical Memorandum.

Construction Site Drainage, ProPECC PN1/94

4.2.2 Under *ProPECC Practice Note PN1/94 Construction Site Drainage* (ProPECC PN1/94), various guidelines for the handling and disposal of construction site discharges are included. The guidelines include the use of sediment traps, wheel washing facilities for vehicles leaving the site, adequate maintenance of drainage systems to prevent flooding and overflow, sewage collection and treatment, and comprehensive waste management (collection, handling, transportation, and disposal) procedures.

4.3 Assessment

Renovation

4.3.1 No major building construction or demolition works will be required for the Project since the building and structures of the Project are already in place.

4.3.2 Silt from any on-site stockpiles may cause water quality impacts if not properly controlled. These impacts would be in the form of increased amounts of suspended solids entering the local drainage system.

4.3.3 These potential water quality impacts can be controlled via the following ways:

- Minimisation of runoff;
- Prevention or minimisation of the likelihood of the identified pollutants being in contact with rainfall or runoff; and
- Measures to abate pollutants in the stormwater runoff.

4.3.4 The construction contractor shall apply for a Discharge Licence from EPD under the WPCO, if necessary. Good practice for dealing with site discharges should be implemented in accordance with ProPECC PN 1/94. All site discharges should be treated as necessary in accordance with the terms and conditions of any Discharge Licence.

4.3.5 With the implementation of the above mitigation measures, water pollution from the minor renovation works will be minimal.

Continued Operation

4.3.6 There is currently no public sewerage connection at the Site and there are no immediate plans by the government to extend the nearby sewerage system to the Site in the near future. Nevertheless, the Applicant confirms that all wastewater will be collected, treated and disposed of in accordance with the WPCO.

4.3.7 Taking into consideration the small quantity of sewage that would be generated from the Project during non-festival periods, the treatment technology, cost and ease of maintenance of the treatment options, a septic tank/soakaway system to be designed based on Appendix D of EPD Practice Note for Professional Persons ProPECC PN5/93 on Drainage Plans including the minimum clear distance between drains of 900mm will be used for handling sewage generated during operation. On a need basis, portable toilets can also be provided during festival periods to address an anticipated increase in quantity of sewage generated.

4.3.8 Regular maintenance and desludging of the septic tank will be required to avoid overflow and to maintain optimum treatment efficiency. The capacity of septic tank shall be sufficient for one day storage of wastewater to avoid overflow. The portable toilets should be maintained by specialist contractor and the collected sewage should be regularly taken off-site for treatment during the festival periods.

4.3.9 With the provision of a septic tank for the development, and additional portable toilets for use during the festival periods, no adverse water quality impacts are anticipated from the operation of the development.

4.4 Conclusions

Construction Phase

4.4.1 The potential water quality impacts arising from the minor construction activities of the Project can be controlled by adopting good practice in accordance with *ProPECC PN 1/94*. The construction contractor shall also apply for a Discharge Licence from EPD under the WPCO, if necessary.

4.4.2 With the above measures in place, no unacceptable water quality impact during the construction phase is anticipated.

Operation Phase

4.4.3 There is currently no public sewerage connection at the Site, and there are no immediate plans by the Government to extend the existing sewerage system nearby to the Site. Nevertheless, the Applicant confirms that all wastewater will be collected, treated and disposed of in accordance with the WPCO.

4.4.4 Because only small quantities of sewage will be generated during non-festival periods, a septic tank may be used for treating sewage. On a need basis, portable toilets can also be provided during festival periods to address an anticipated increase in quantity of sewage generated.

4.4.5 During continued operation of Tin Kwong Lun Yee, with the provision and regular maintenance of the above-mentioned sewage treatment facilities, no adverse water quality impacts are anticipated from the upgraded toilets and septic tank/soakaway pit to be installed.

4.4.6 Overall, therefore, no adverse water quality impact from the minor renovation works or from the continued operation of Tin Kwong Lun Yee is anticipated.

5 WASTE MANAGEMENT

5.1 Introduction

5.1.1 This section addresses the waste management implications associated with the Project during minor renovation and continued operation of Tin Kwong Lun Yee. Mitigation measures are recommended, where necessary, as part of the assessment

5.2 Environmental Legislation and Standards

5.2.1 In carrying out the assessment, references have been made to the following relevant legislation, documents and guidelines that are applicable to waste management and disposal in Hong Kong:

- The Waste Disposal (Amendment) Ordinance (Cap. 354) (WDO) and subsidiary legislation such as the Waste Disposal (Chemical Waste) (General) Regulation sets out requirements for the storage, handling and transportation of all types of wastes, and subsidiary legislation such as Waste Disposal (Charges for Disposal of Construction Waste) Regulation and the Waste Disposal (Chemical Waste) (General) regulation.
- ETWB Technical Circular (Works) No. 19/2005, Environmental Management on Construction Sites.
- ETWB Technical Circular (Works) No. 22/2003A, Additional measures to improve Site Cleanliness and Control Mosquito Breeding on Construction Sites.
- Development Bureau (DEVB) Technical Circular (Works) No. 6/2010, Trip ticket system for Disposal of Construction & Demolition Materials.

5.3 Assessment and Mitigation

Renovation

5.3.1 No major building construction or demolition works will be required for the Project since the buildings and structures that comprise the Project are already in place.

5.3.2 The amount of Construction and Demolition (C&D) waste to be generated from the minor construction works is estimated at less than 10 tonnes. Any C&D waste that cannot be reused within the Site and will be disposed of at a public fill reception facility or at a landfill operated by government.

5.3.3 The key potential waste sources during the minor construction works are:

- Inert Construction and Demolition (C&D) materials (e.g. concrete and bricks);
- Non-inert C&D Waste (e.g. wood and plastics);
- Chemical wastes from vehicles/plant maintenance; and
- General refuse generated by site workers.

5.3.4 Insignificant C&D wastes are likely generated from the construction activities in the view of the small scale of the works. On-site waste management should be implemented to sort and separate inert and non-inert wastes prior to disposal.

5.3.5 Spent lubricants which are chemical wastes may be generated, though in small quantity in view of the small scale works.

5.3.6 Nevertheless, a licensed collector shall be employed to handle and dispose of the chemical wastes, if any. Furthermore, any chemical waste should be handled in accordance with EPD's *Code of Practice on the Packaging, Labelling and Storage Chemical Waste*.

5.3.7 General refuse generated by site workers will be disposed of regularly along with the existing Municipal Solid Waste (MSW) generated from the Site so as to avoid creating odour impact or pest and vermin problems within the Site.

5.3.8 The following good site practice is recommended:

- The construction contractor should adopt good housekeeping practices, such as waste segregation prior to disposal. Besides the provision of stockpiling and segregating areas within the site, effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating odour impact or pest and vermin problems. Waste storage areas should be well maintained and cleaned regularly.
- General refuse, or MSW, should be stored in enclosed bins or compaction units. A waste collector will be used by the contractors to remove MSW from the Site. Preferably an enclosed and covered area should be provided to reduce the occurrence of windblown materials.

5.3.9 With the above measures in place, no unacceptable waste management impact during the construction phase is anticipated.

Continued Operation

5.3.10 MSW mainly comprising general refuse is the major type of waste to be generated from the continued operation of Tin Kwong Lun Yee. Since no commercial catering service will be provided, no significant amount of food waste will be generated. Refuse is stored in enclosed bins. When full, these bins are emptied at the nearby Refuse Collection Point.

5.3.11 With the above-mentioned MSW handling, no adverse waste management impact is anticipated.

5.4 Conclusions

5.4.1 Only minor renovation works will be required for the Project. The quantity of construction waste arising from these minor works is anticipated to be minimal.

5.4.2 During continued operation of Tin Kwong Lun Yee, the MSW will be disposed of at a nearby Refuse Collection Point.

5.4.3 Overall, therefore, no adverse waste management implications have been identified from the minor renovation works or from the continued operation of Tin Kwong Lun Yee.

6 CONCLUSIONS

6.1.1 Tin Kwong Lun Yee (天罡隆義) is a branch of Vajrayana in Taiwan stream from the Tibetan Buddhism, which located at Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744 H in D.D. 132, Tuen Mun (the Site), which from "Green Belt" ("GB") to "Government, Institution or Community (G/IC)".

6.1.2 Potential environmental impacts that may arise from the construction and operation of the Tin Kwong Lun Yee religious institution have been assessed and appropriate mitigation measures are recommended to support the current rezoning application.

6.1.3 The contractor for the minor construction works shall implement dust control measures in accordance with the requirements of the APCO (Construction Dust) Regulation. The construction contractor shall also provide regular maintenance of any plant and equipment so as to minimise gaseous emissions. With the implementation of these mitigation measures, there should be no adverse air quality impacts during the construction phase of the Project. During operation, there will be insignificant emissions from vehicles transporting visitors to the Site. On-site joss paper burning is currently not allowed, but if the Applicant considers allowing this in the future, then smokeless joss paper furnaces with dust control measures shall be installed and the recommendations in EPD's Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places will be followed. Therefore, no adverse air quality impact is anticipated during the operational phase of the Project.

6.1.4 No adverse construction noise impact will be anticipated with the implementation of noise mitigation measures during minor construction works. No adverse noise impact due to traffic or religious ceremonies/activities will be anticipated during the operation of the Site because of insignificant increase in traffic generation.

6.1.5 The potential water quality impacts arising from the minor construction activities of the Project can be controlled by adopting good practice in accordance with ProPECC PN 1/94. The construction contractor shall also apply for a Discharge Licence from EPD under the WPCO, if necessary. There is currently no public sewerage connection at the Site, and there are no immediate plans by the Government to extend the existing sewerage system nearby to the Site. Nevertheless, the Applicant confirms that all wastewater will be collected, treated and disposed of in accordance with the WPCO. During operation, because only small quantities of sewage will be generated during non-festival periods, a septic tank may be used for treating sewage. On a need basis, portable toilets can also be provided during festival periods to address an anticipated increase in quantity of sewage generated. With the provision and regular maintenance of the above-mentioned sewage treatment facilities, no adverse water quality impact is anticipated during operation of the Project.

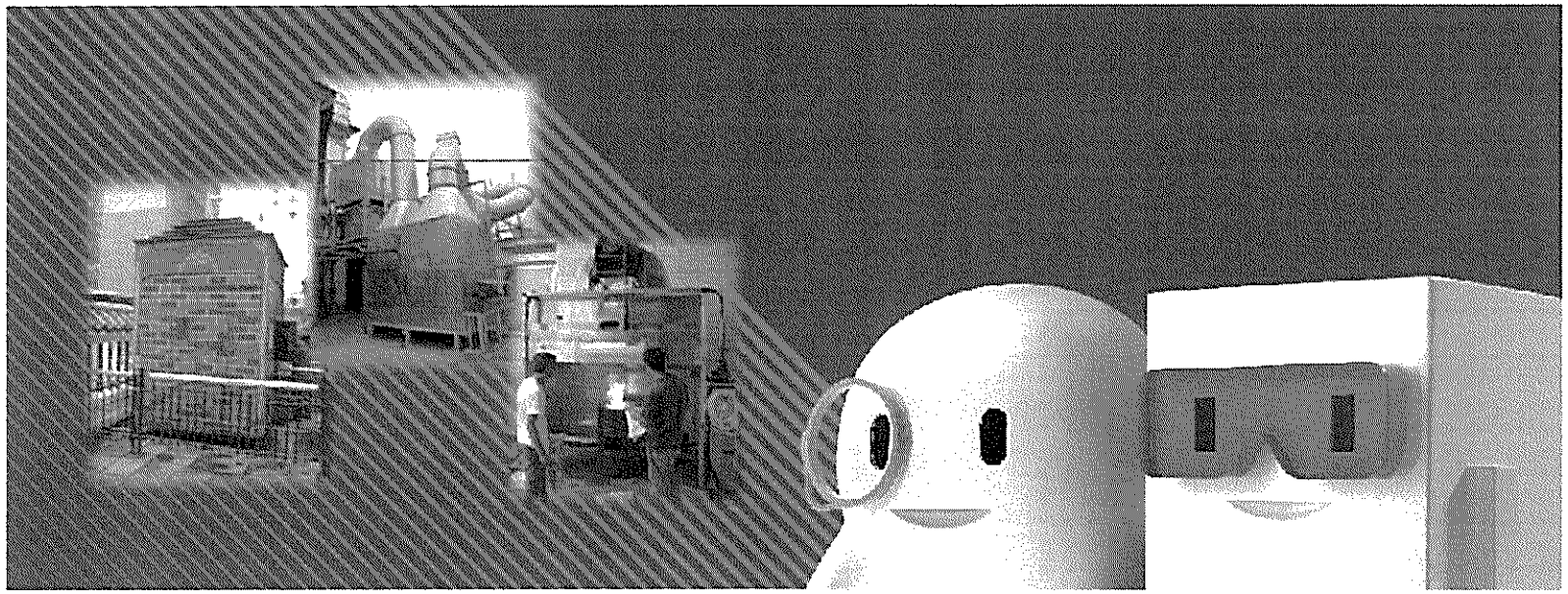
6.1.6 There is no evidence to suggest that there have been potentially contaminating activities carried out at this Site in the past and therefore no suggestion that the land may be contaminated. MSW generated by site workers during the construction stage will be disposed of regularly to avoid creating odour impact or pest and vermin problems. With the above measures in place, no unacceptable waste management impact during the construction phase is anticipated. During the operation, the only major type of waste that will be generated is MSW, which will be collected and disposed of regularly. As such, no adverse waste impact is anticipated during the operation phase and no mitigation measures are considered to be necessary.

6.1.7 With the implementation of the recommended mitigation measures and the adoption of good site practice, the findings of this Environmental Assessment study demonstrate the environmental acceptability of the development in terms of both construction and operation.

Appendix A **SMOKELESS FURNACE CATALOGUE FROM HKPC**

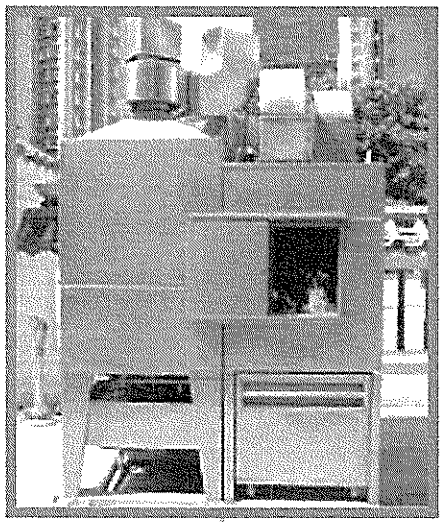
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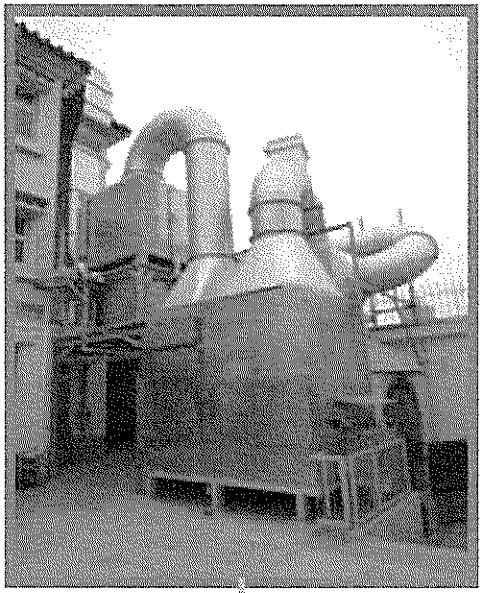


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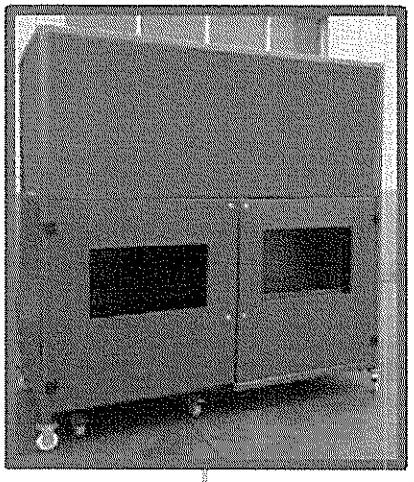
"Qing Yan" Eco-Furnace
『清煙』化寶爐



Paper Artifact Furnace 紙紮爐



Mobile Furnace 流動化寶爐

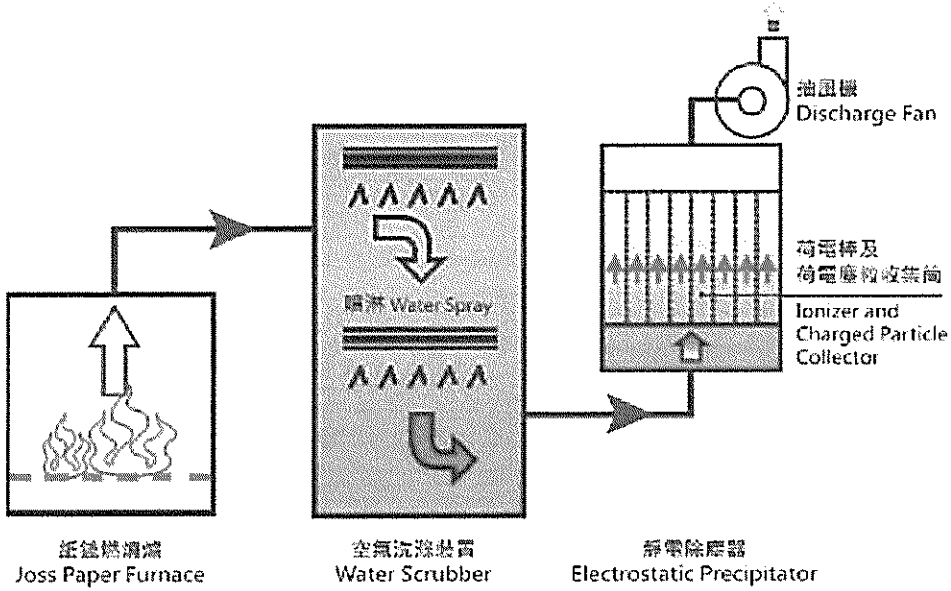


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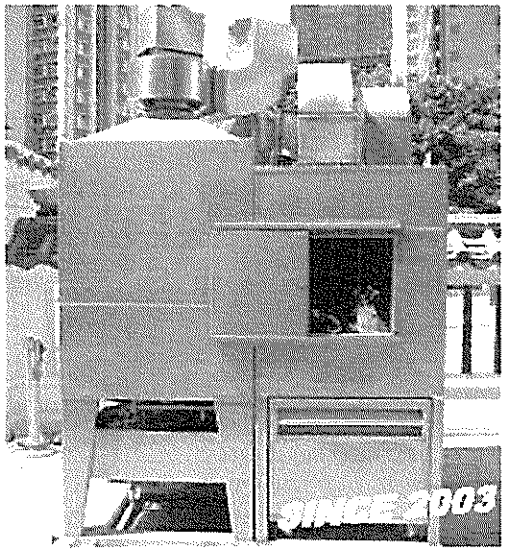
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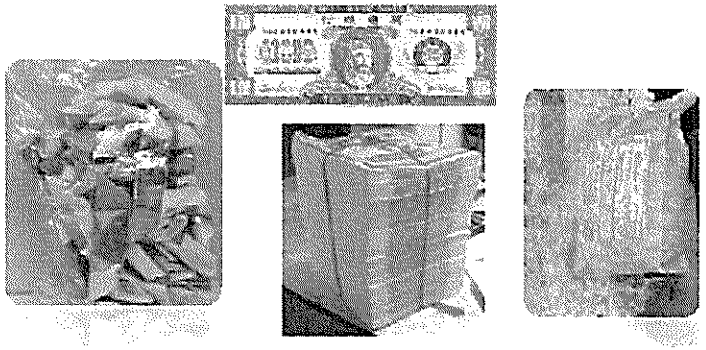
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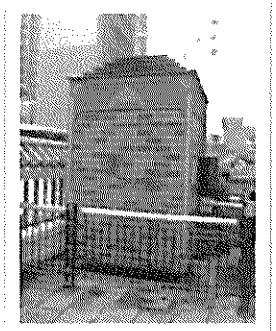


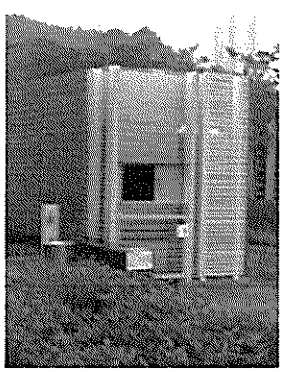


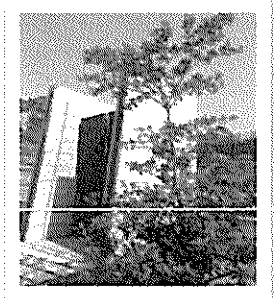
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處理量	每小時40公斤
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燃燒室尺寸	內部：700(W) x 800(D) x 1100mm(H) 爐口：600(W) x 400mm(H)
適合場所	廟宇、道觀、火葬場、醫院等
項目經驗	共42台（到2014年2月為止）

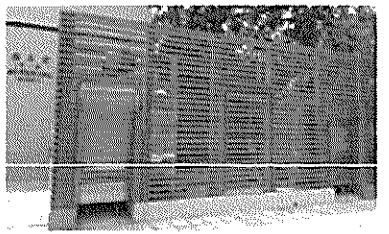
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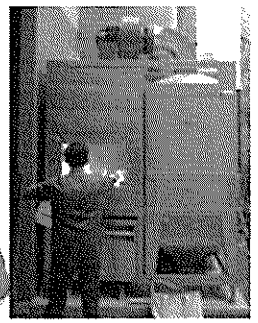
	地點	客戶	年份
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2.	紅磡觀音廟	華人廟宇委員會	2004
3.	赤柱天后廟	赤柱街坊福利會	2005
4.	旺角水月宮	東華三院	2005
5.	上環通菩薩(2台)	通菩薩	2006
6.	天后天后廟	康民署/仁利建築	2006
7.	九龍城侯王廟	偉業聯利/華人廟宇委員會	2006
8.	紅磡觀音廟	華人廟宇委員會	2006
9.	大坑鐘花宮	華人廟宇委員會	2007
10.	鑽石山火葬場(4台)	貪環署/建榮署/華潤營造	2008
11.	黃大仙祠	色彩園	2009
12.	北區醫院	醫院管理局	2010
13.	大埔那打素醫院	醫院管理局	2011
14.	大埔醫院	醫院管理局	2011
15.	沙田醫院	醫院管理局	2011
16.	沙田威爾斯親王醫院	醫院管理局	2012
17.	秀茂坪天后廟	益興建築	2012
18.	和合石骨灰龕園(12台)	貪環署/建榮署/安保工程	2012
19.	和合石火葬場(3台)	貪環署/建榮署/宏宗建築	2012
20.	北大嶼山醫院	醫院管理局	2013
21.	柴灣歌連臣角火葬場(2台)	貪環署/建榮署/冀圖機電	2013
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23.	忠和精舍(2台)	忠和精舍	2014

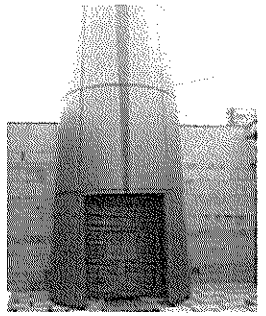










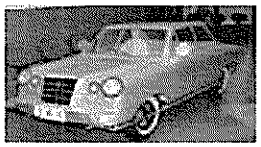


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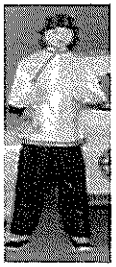
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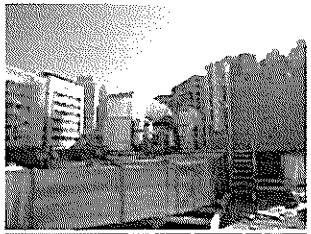




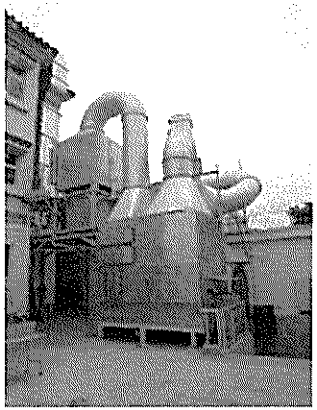
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適合燃燒祭品	大型紙紮祭品 / 大量燃燒小型紙祭品
處理量	每小時400公斤
設備尺寸	除煙設備空間約12m x 7m x 5m(H)
燃燒室尺寸	內部： 1300(W) x 2500(D) x 2000mm(H) 爐口： 1300(W) x 1600mm(H)
適合場所	殯儀館、墳場、骨灰龕等
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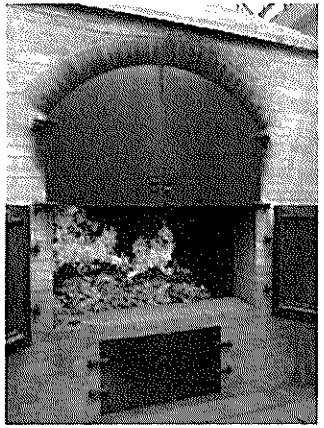
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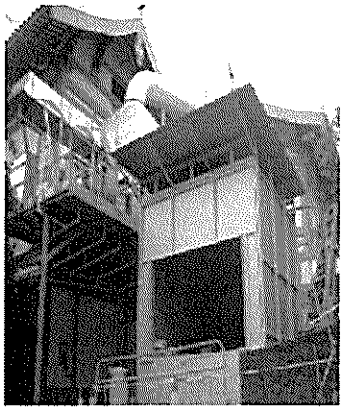
項目	地點	開始運作年份
1.	大園寶福紀念館（殯儀館）	2008
2.	九龍塘一佛堂	2009
3.	大角咀九龍殯儀館	2010
4.	沙田寶福山（骨灰龕）	2011
5.	澳門永念庭（骨灰龕）	2012
6.	香港殯儀館	建造中
7.	大園寶福紀念館新系統	建造中
8.	鑽石山殯儀館	建造中
9.	世界殯儀館	建造中

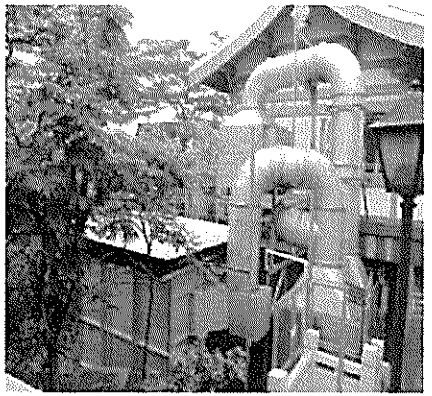










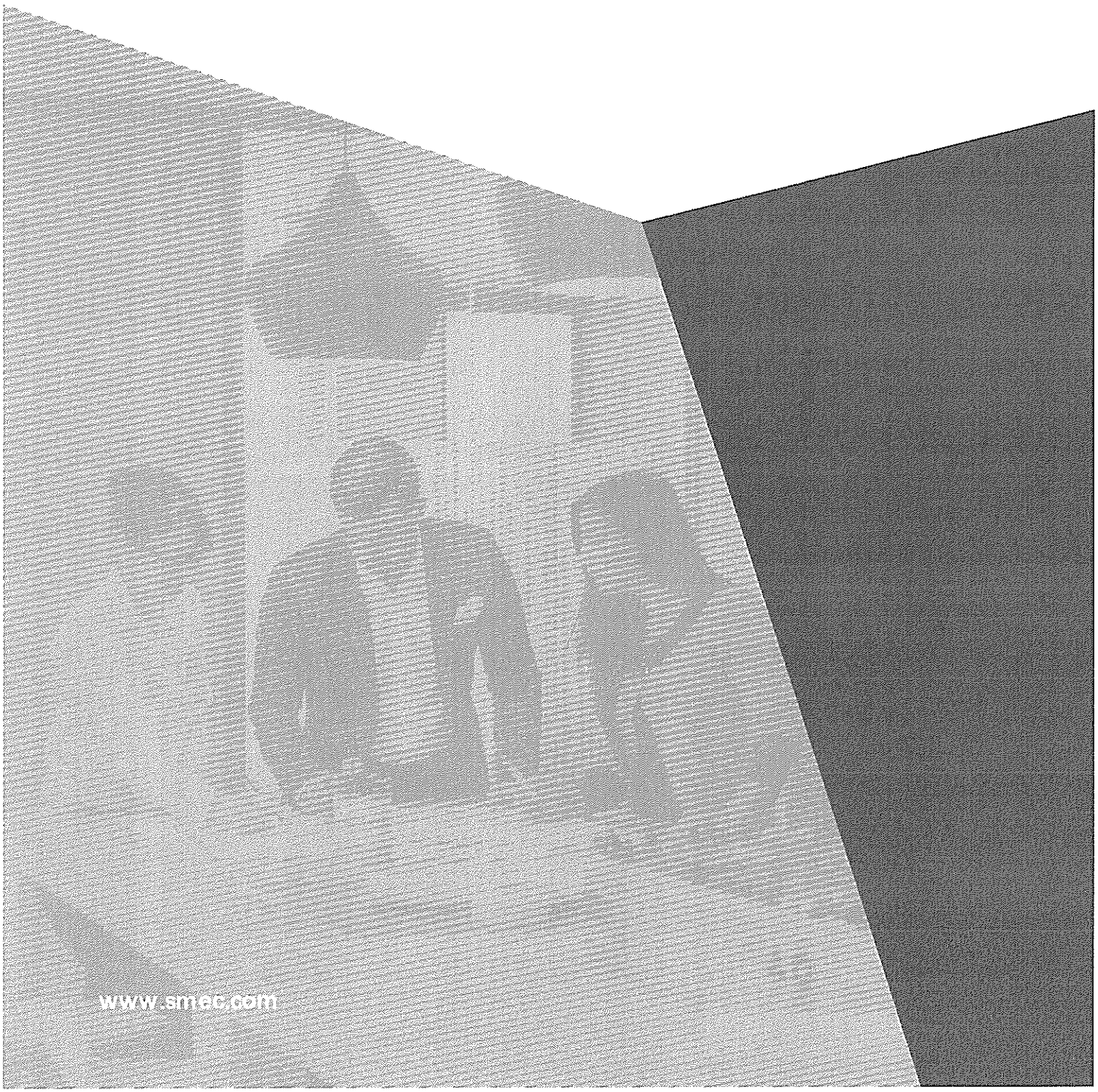


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D02/01 Rev 1.0 Sewerage Impact Assessment Report

S12A Rezoning Application from "GB" to "G/IC" for a Religious Institution at Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744H and 1744I in DD 132, Tuen Mun

Prepared for Tin Kwong Lun Yee Ltd
5 June 2019

SMEC INTERNAL REF. 7076606

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Project Number:	7076606
Revision Number:	1.0

Revision History

REVISION NO.	DATE	PREPARED BY	REVIEWED BY	APPROVED BY
0	12 November 2018	Austin CHAN	Cleo YIP	Antony WONG
1	5 June 2019	Austin CHAN	Cleo YIP	Antony WONG

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This report is confidential and is provided solely for the purposes of supporting S12A Rezoning Application from "GB" to "G/IC" for a Religious Institution at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H and 1744 I in D.D. 132, Tuen Mun. This report is provided pursuant to a Consultancy Agreement between SMEC Asia Limited ("SMEC") and Tin Kwong Lun Yee Ltd, under which SMEC undertook to perform specific and limited tasks for Tin Kwong Lun Yee Ltd. This report is strictly limited to the matters stated in it and subject to the various assumptions, qualifications and limitations in it and does not apply by implication to other matters. SMEC makes no representation that the scope, assumptions, qualifications and exclusions set out in this report will be suitable or sufficient for other purposes nor that the content of the report covers all matters which you may regard as material for your purposes.

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The report supersedes all previous draft or interim reports, whether written or presented orally, before the date of this report. This report has not and will not be updated for events or transactions occurring after the date of the report or any other matters t might have a material effect on its contents or which come to light after the date of the report. SMEC is not obliged to inform you of any such event, transaction or matter nor to update the report for anything that occurs, or of which SMEC becomes aware, after the date of this report.

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1 INTRODUCTION

1.1 Background

1.1.1 SMEC Asia Limited (SMEC) has been commissioned by the Tin Kwong Lun Yee (the Applicant) to conduct a Sewage Impact Assessment (SIA) to support the Planning Application under S12A of the Town Planning Ordinance (TPO), to rezone the subject site, which comprises Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D. 132, Tuen Mun (the Site or the Project) from "Green Belt" ("GB") to Government, Institution or Community" ("G/IC"). The "G/IC" zoning covers religious institution as a permitted use under column 1 in the relevant Approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35.

1.1.2 Tin Kwong Lun Yee (天罡隆義) is a branch of Vajrayana (密宗) from the Tibetan Buddhism (藏傳佛教) Religion of the Taiwan stream. Tin Kwong Lun Yee is dedicated to provide training and coaching to members who wish to realise the Buddha's teaching in their daily life and to benefit all sentient beings as well. As a low-profile and newly established religion in Hong Kong, Tin Kwong Lun Yee is committed to provide social services by volunteering and offers assistance as needed to organisations.

1.2 Site Description

1.2.1 The Site is located at the upper part of the Kwong Shan Tsuen and north-west of Po Tin Estate in Tuen Mun, as illustrated on ***Figure 1.1***. The Site occupies an area of 3,137m^2. The Site was vacant before 1960. Three existing 2-storey villas occupy the Site and the building licence for these buildings was issued on 1960. The site was used for residential purposes before 1960. As such, sewage/ wastewater was already generated from the Site until 1990s. In 2008, the Site was acquired by Tin Kwong Lun Yee and the abandoned villas were renovated for its existing use. The Site is accessible from an existing paved access road connected to Hing Fu Street.

1.2.2 As confirmed by the Applicant, no kitchen or no catering service is provided to the visitors or for site staff, so there will be no wastewater generated from this source.

1.2.3 As described above, the Site has been in operation for some fifty years without adverse sewage impact generated and there is no new use that will increase the risk of water pollution or sewage impact.

1.3 Project Description

1.3.1 ***Figure 1-1*** presents a Master Layout Plan of Tin Kwong Lun Yee temple (the Project). As illustrated, the Project comprises the following facilities:

- One columbarium blocks (Block 1)
- One building block for columbarium, toilet, management office and storage (Block 2)
- One building block for religious and columbarium use (Block 3)
- A car parking area
- Landscaped areas, pedestrian areas and access roads

1.3.2 No major building construction or demolition works will be required for the Project since the buildings and structures are already in place.

1.3.3 Totally 11,094 niches will be provided for the Project and 936 niches of which were sold on or before 30 June 2017 to satisfy the genuine need of columbarium supply in Hong Kong.

1.3.4 It is envisaged that the additional proposed columbarium facilities can be accommodated within the existing building structures, including the religious hall and management office.

1.3.5 The operating hours of Tin Kwong Lun Yee are from 10am to 5pm during non-festival periods and from 9am to 6pm during festival periods – these include the Ching Ming Festival and the Chung Yeung Festival.

1.3.6 A site visit was carried out on 22 June 2018. Approximately 5 to 10 minutes on foot are required to reach the Site from Hing Fu Street. As advised by the Applicant, it is unlikely that a large number of visitors will come to the Site during non-festival periods, while advance booking is required during festival periods to control visitor the numbers.

1.3.7 As advised by the Applicant, not more than five 28-seat shuttle buses will be provided for the visitors between 8am and 6pm during festival periods. Advance reservation for the shuttle bus services will be required. No other vehicles except emergency vehicles and no other visitors apart from those who will have made the reservation in advance will be allowed to enter the Site during festival periods.

1.3.8 During non-festival periods, not more than 48 visitors per day are expected to visit the site. Therefore, no advance reservation and shuttle bus service, as well as traffic control will be necessary.

1.3.9 There may be religious activity activities carried out by worshippers during non-festival periods.

1.4 Objectives of this Report

1.4.1 This Sewerage Impact Assessment (SIA) has been undertaken to access any potential sewage impacts arising from the Project.

1.4.2 Mitigation measures have been recommended, where appropriate, to alleviate any identified sewage impacts or constraints during the operation of the Project.

1.5 Reference Materials

1.5.1 The following sources of information have been specifically referred to:

- Environmental Protection Department (EPD) publication Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0, March 2005
- Hong Kong BEAM Society, BEAM Plus Version 1.2 for New Buildings, November 2012
- EPD publication Guidance Notes On Discharges From Village Houses
- EPD publication ProPECC PN5/93, Drainage Plans, September 1993
- Drainage Services Department (DSD) publication Sewerage Manual – Key Planning Issues and Gravity Collection System

Figure 1-1 Site Location and its Environs

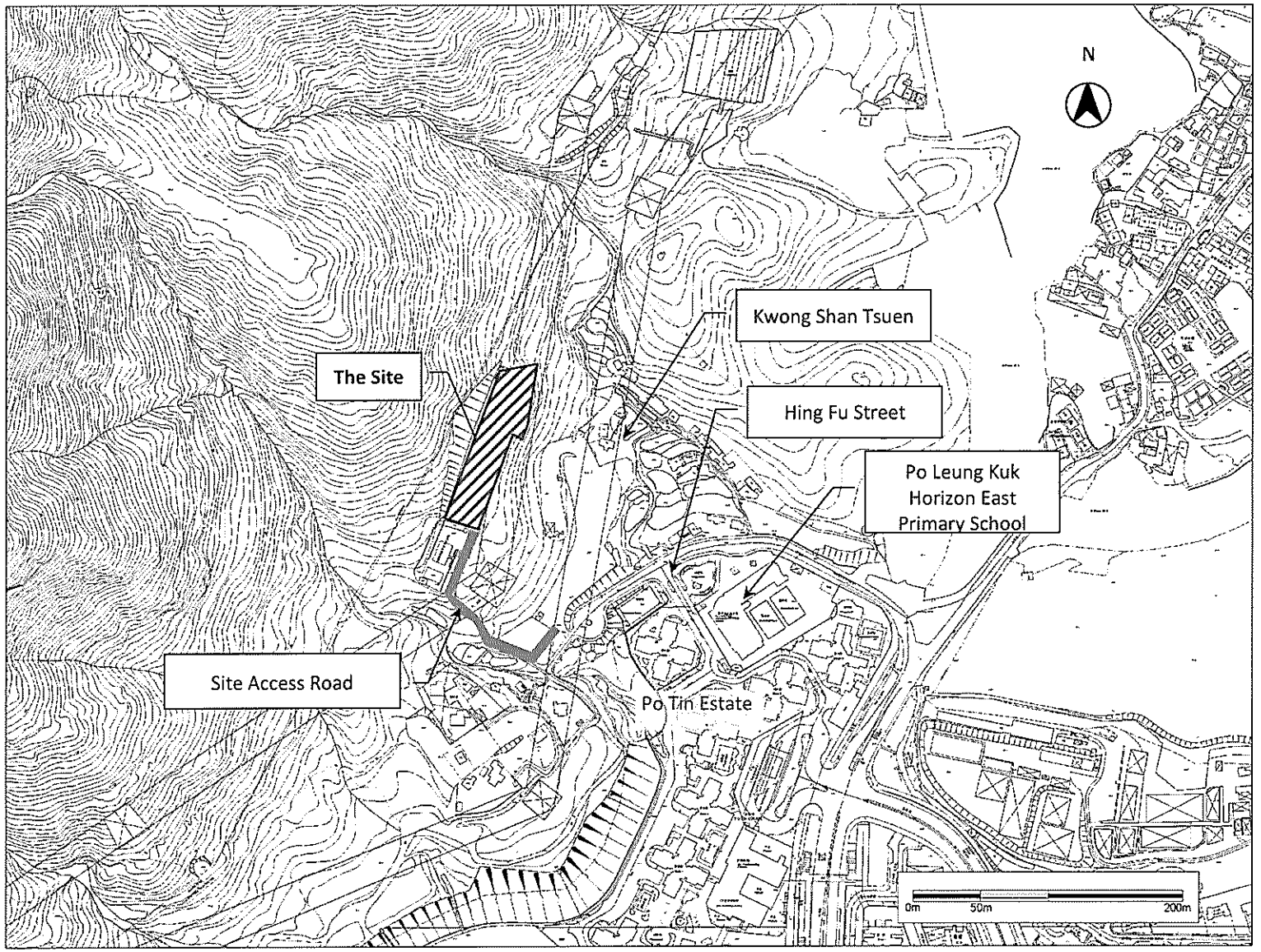
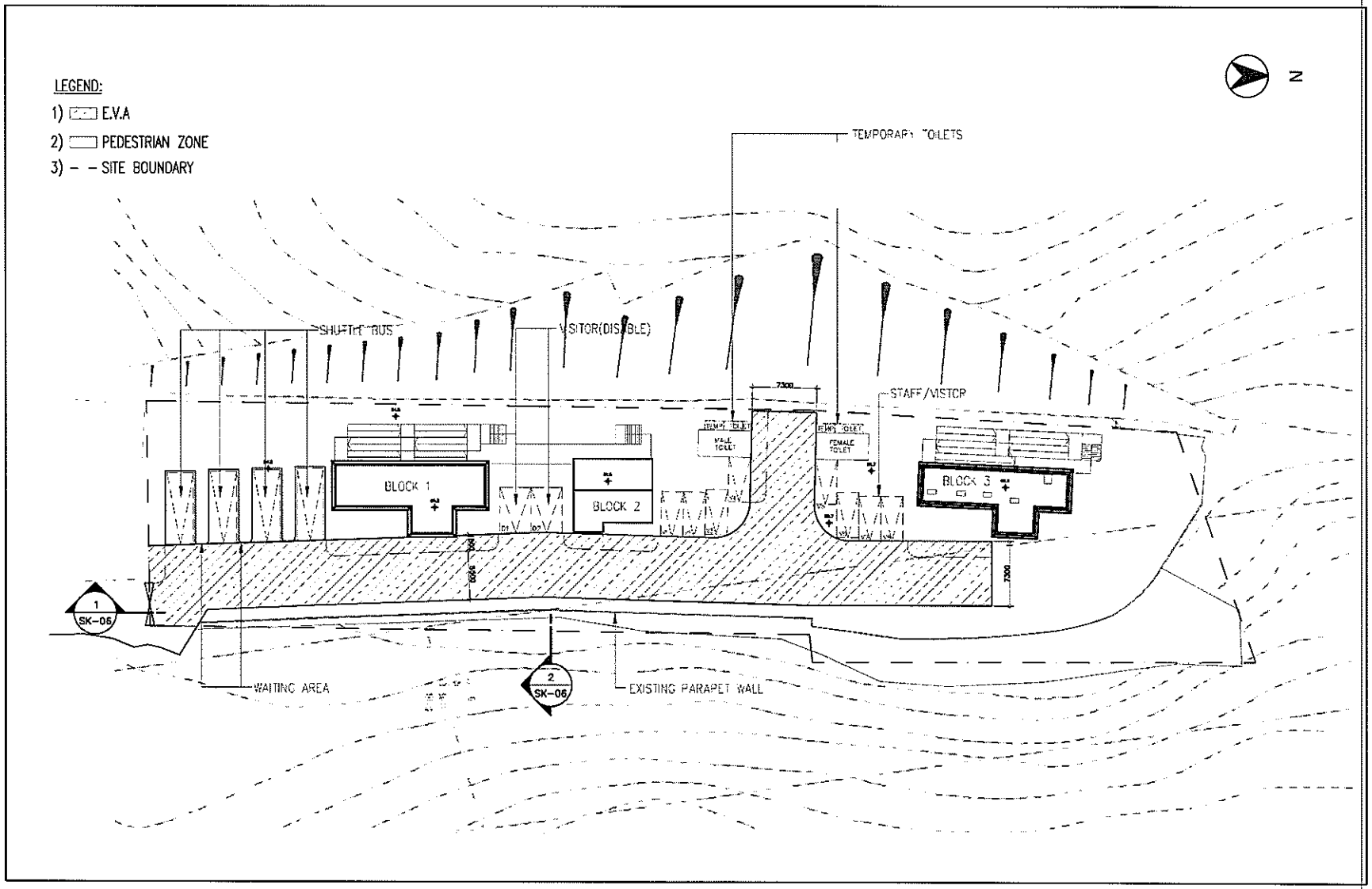


Figure 1.2 Master Layout Plan of the Project



2 DESCRIPTION OF EXISTING ENVIRONMENT AND BASELINE CONDITIONS

2.1 Site Location

2.1.1 The Site is located at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D.132, Tuen Mun. The Site is currently zoned "Green Belt" ("GB") under the Approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35. It is surrounded by slopes, mature trees, burial ground, temples and columbarium.

2.2 Existing Baseline Conditions

2.2.1 The drainage plans in the vicinity of the Site were reviewed at the Drainage Services Department (DSD) offices on 7 February 2012 to gather background information on existing sewerage infrastructure in the area. Upon review of the relevant sewerage drainage plan (5-NE-25D-3), it was confirmed that there is no existing public sewerage system in the vicinity of the Site. As further verified from the latest information of Lands Department (LandsD) GeoInfo Map on 22 October 2018, there is no update of the public sewerage system within the site and in its surrounding.

2.2.2 Site visits were carried out on 22 June and 21 September 2018 to further review the existing public sewerage system. Provision of public sewerage connection was not observed in the vicinity of the Site. The nearest existing public sewerage connection is located near the Hing Kwai Street, opposite to the Po Tin Estate Bus Terminus, which is around 600m from the Project Site.

2.2.3 There is no public sewerage connection in the vicinity of the site at present, and there are no immediate plans by the government to extend the sewerage system to the Site in the near future. All the wastewater generated from the Site will be tankered away regularly.

2.2.4 Portable toilets with aboveground storage tanks / tailor-made aboveground storage tank are recommended to collect and tanker away the wastewater.

2.3 Potential Sewerage Impact

2.3.1 There is no public sewerage system nearby. To prevent sewerage impacts, sewage collected at the portable toilets during festival periods will be taken off-site for treatment.

3 SEWAGE ANALYSIS

3.1 Assumptions and Methodology

3.1.1 Two scenarios are assessed: "Festival Period Scenario" represents a situation when all urns are fully utilised and attracting the maximum number of visitors during festival periods, such as Ching Ming or Chung Yeung Festivals; and the "Non-Festival Scenario" represents situation when all urns are fully utilised and attracting the maximum number of visitors during non-festival periods.

3.1.2 The estimated numbers of visitors and staff during festival periods between 9am and 6pm and during non-festival periods between 10am and 5pm due to the Proposed Development (i.e. provision of 11,094 niches) are shown in ***Table 3-1***.

Table 3-1 Estimated Populations During Festival Periods and Non-festival Periods

PERIOD	NO. OF VISITORS	NO. OF STAFF [NOTE 1]
Festival	5,600[Note 2]	~22
Non-festival	~48	~8

Notes:

1. Full time on site.
2. The number of visitors is advised by the Traffic Consultant.

3.1.3 There is no public sewerage connection in the vicinity of the Site at present, and there are no immediate plans by government to extend the sewerage system to the Site in the near future. All wastewater generated from the Site will be tankered away.

3.1.4 Wastewater generated from the Site will be sewage generated from the portable toilets and greywater from sinks for hand washing.

Assumptions for Sewage Generation from Visitors During Festival Periods

1. Up to 25% of visitors will use the toilet on-site.
2. With reference to page 3,081 of the sixth edition of *Magill's Medical Guide*, published by Salem Press in 2011, human micturition average~200mℓ[Ref.#1].
3. The Applicant has committed to installing a water saving flush of ~1.0 ℓ /flush in chemical toilets/container toilets (see ***Appendix A***).
4. For hand washing, the wastewater was estimated based on the *BEAM Plus New Building (Version 1.1)* published by BEAM Society as shown below[Ref.#2]:
   (a) Tap flow rate = 8.3ℓ/min
   (b) Duration of hand washing = 10s
5. The unit rate of total sewage generation from a visitor is:
   (a) Unit flow of toilet flushing = 1.0ℓ + 200mℓ = 1.2ℓ
   (b) Unit flow of hand washing = 8.3ℓ/min / 60s x 10s = 1.4ℓ/wash
   (c) Unit flow of total sewerage = 2.6ℓ/person

1 Magill's Medical Guide, 6th ed., various medical editors, Salem Press, USA, 2011.
2 The default assumptions suggested in the BEAM Plus for New Buildings estimate the water consumption for cisterns for non-residential use.

Assumptions for Sewage Generation from Visitors during Non-Festival Periods

1. Up to 100% of visitors will use the toilet on-site.
2. With reference to page 3,081 of the sixth edition *of Magill's Medical Guide*, published by Salem Press in 2011, human micturition average~200mℓ[Ref.#1].
3. The flushing volume of water saving flushing water closets is around 7.5ℓ estimated based on the *BEAM Plus New Building (Version 1.2)* published by BEAM Society as shown below[Ref.#2].
4. For hand washing, the wastewater was estimated based on the *BEAM Plus New Building (Version 1.1)* published by BEAM Society as shown below[Ref.#2]:
   (a) Tap flow rate = 8.3ℓ/min
   (b) Duration of hand washing = 10s
   (c) The unit rate of total sewage generation from a visitor is:
   (d) Unit flow of toilet flushing = 7.5ℓ + 200mℓ = 7.7ℓ
   (e) Unit flow of hand washing = 8.3ℓ/min / 60s x 10s = 1.4ℓ/wash
   (f) Unit flow of total sewerage = 9.1ℓ/person

Sewage Generation from Site Staff

3.1.5 The unit flow factor is assumed to be 0.08m^3/person/day, which is the global unit flow factor for industrial employee as recommended in the *Guidelines for Estimating Sewerage Flows for Sewerage Infrastructure Planning Version 1.0* published by EPD in 2005.

3.2 Results and Discussion

3.2.1 As presented in ***Appendix C*** and ***Appendix D***, the peak discharge flows during festival periods and non-festival periods are summarised in ***Table 3-2*** .

Table 3-2 Sewage Generated During Festival Periods and Non-festival Periods

SOURCE	WASTEWATER GENERATION, M^3/DAY	
	FESTIVAL PERIOD	NON-FESTIVAL PERIOD
Visitors	3.64	0.44
Site Staff	1.76	0.64
TOTAL	**5.4**	**1.08**

3.2.2 The estimated volume of sewage generated from the Site during festival periods and non-festival periods will be 5.4m^3/day and 1.08m^3/day, respectively. Because the maximum amount of sewage will be less than 2m^3/day during non-festival period, the sewage can be treated by on-site septic tank/soakaway pit system which the sludge will be collected by a licensed collector when needed. During festival periods, the sewage generated during peak period will be collected by a licensed collector.

3.2.3 To cater the sewage arising from the Potential Scheme with up to 11,094 niches, the following two options are recommended:

(a) **Option 1 – Non-Festival Period** The sewage will be less than 2m^3/day and so the sewage can be treated by the on-site septic tank/soakaway pit system.

(b) **Option 2 – Festival Period**

(i) For the site staff's sewage of 1.76m^3/day, it will be treated by the on-site septic tank/soakaway pit system.

(ii) For the visitors' sewage of 3.64m^3/day, it should be collected by portable toilets and the collected sewage shall be tankered away by a licensed collector. Portable toilets can be the toilets shown in ***Appendix A*** and ***Appendix B*** described as follows:

- ❖ a container toilet installed with jet toilets (~1 ℓ of water per flush). The container toilet should be connected to a sewage holding tank with a size of at least 4m^3; or
- ❖ at least ten chemical toilets.

3.2.4 Sludge in septic tank/soakaway pit system shall be collected by a licensed collector. Similarly, sewage from chemical toilets or from storage tank should be tankered away off site by a licensed collector.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1.1 Potential sewage impacts that may be potentially arising from the operation of the Tin Kwong Lun Yee religious institution have been assessed and appropriate mitigation measures are recommended to support the current rezoning application.

4.1.2 There is no public sewerage connection in the vicinity of the site at present, and there are no immediate plans by government to extend the sewerage system to the Site in the near future.

4.1.3 During the festival period for provisions of 11,094 niches, the total wastewater generated from the Site has been estimated at ~5.4m^3/day. On the other hand, the estimated total wastewater generated from the Site during the non-festival period is about 1.08 m^3/day. As both periods have the maximum sewage less than 2m^3/day for staff, the sewage is suggested to be treated by on-site septic tank/soakaway pit system which the sludge will be collected by a licensed collector when needed.

4.1.4 For potential scheme with provisions of up to 11,094 niches during festival period, the total wastewater generated from the Site has been estimated at ~5.4m^3/day. Among the ~5.4m^3/day sewage generated, it is recommended that sewage generated by staff of about 1.76m^3/day will be treated by the on-site septic tank/soakaway pit system, while that 3.64m^3/day generated by visitors will be collected by portable toilets and then tankered away by a licensed collector. The recommended types of portable toilets to be adopted are either a container toilet installed with jet toilets with at least 4m^3 in size or a least ten chemical toilets.

4.1.5 In conclusion, the sewage impacts imposed by the Project are considered to be acceptable.

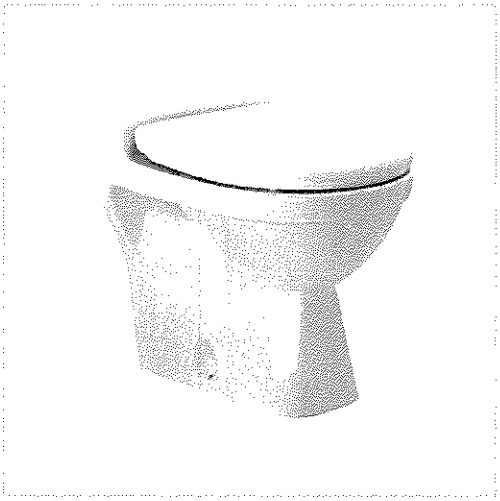
Appendix A CATALOGUES OF CONTAINER TOILET INSTALLED WITH JET TOILETS

Jets™ 50M Toilet

Product No. TO650PO

Tel +47 70 03 91 00
www.jetsgroup.com

Rev 2016-05-09 09:08



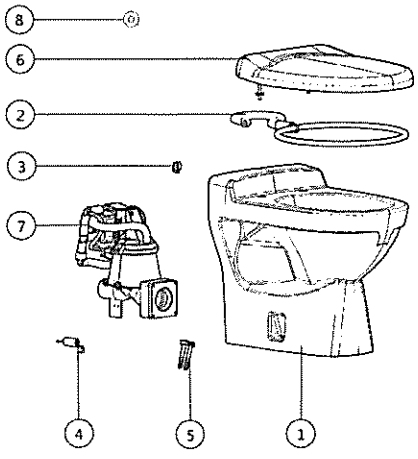
Jets™ 50M Toilet is a pedestal pan design. With a focus on both simple elegant design and comfort, this floor mounted toilets contemporary look complements any installation.

Warranty

All products of the company are sold and all services of the company are offered subject to Jets Vacuum AS General Sales Conditions detailing warranty and terms and conditions of sale, copies of which will be furnished upon request. The information provided herein is for guidance only; it does not constitute a guarantee of the performance or specification of any individual product or component.

Disclaimer

Product color reproduction is as near to actual color as product methods allow. All rights reserved. Information is subject to change without notice. No part of this document may be reproduced in any form by any means without prior written approval.



Technical Data

Outside Dimensions	540 x 365 x 475 mm (LxWxH)
Weight	25 kg
General Tolerance	Bowl dimensions ±2%
Discharge Valve Outlet	Outside diameter Ø 50 mm
Water Connection	½" male BSP
Generic Material	Porcelain
Outside Dimensions	550 x 385 x 475 mm (LxWxH)

Operating Data

Flushing Time	5 seconds
Discharge Time	2 seconds
Water Pressure	2-7 bar
Operating Vacuum	Recommended 30-55 % Vacuum
Air Consumption	Approx. 48 liters at 50% Vacuum
Water Consumption	1 liter/s (3 bar)
Temperature Range	Minimum 1°C to Maximum 60°C (unless frost protection measures are taken)
Note:	Values are dependent on valve type.

Patents and Trademarks

Jets™, Vacuumarator™, Helivac™, VC™, VOD™, CVS™ and Softsound™ are trademarks and/or registered trademarks of Jets. © Copyright 2011, Jets AS.

Options

Optional functions compatible with this product

VFD: Vacuum Flush and Discharge
EFD: Electrical Flush and Discharge
CFD: Central Flush and Discharge
LFD: Local Flush and Discharge

Components

Construction Characteristics

1	Toilet Bowl JETS 50M	063600100*
2	Flushing ring	069510500*
3	Hose Clip 13-20mm	034233401*
4	Spring	053531725*
5	Fastening Kit, floor	069606301*
6	Seat & Cover	See product selection
7	Valve	See options listed above
8	Release Mechanism	See product selection

** Component/s available as replacement parts*

Accessories

Construction Characteristics

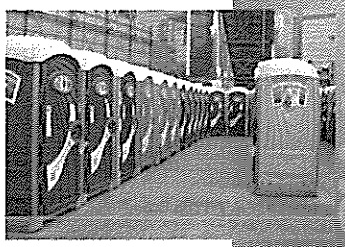
Vacuum Breaker Kit	034507320
Rubber Elbow w/hose clip	034505450
Rubber Sleeve w/hose clip	034505550
Rag Hook w/support	034102902
Pipe Packet	034399300
Cover, Complete	063602121
Base plate	063608700

Appendix B **CATALOGUES OF CHEMICAL TOILETS**


彩虹 流動廁所
Enjoy Your Time
舒適~環保~
衛生的最佳選擇
Toi Toi Hong Kong Limited
Tel: 852 2477 1911 Fax: 852 2443 4790
Email: tthk@toitoi.com.hk Website: www.toitoi.com.hk
Toi Toi Guangdong Limited
通利流動廁所租賃服務部
Tel:86 150-1253-5110 Fax: 852 2443 4790
Email: sales@toitoi.com.cn Website: www.toitoi.com.hk
TOI TOI

彩虹　流動廁所





環保性：產品爲高密度聚乙稀製成，具有可回收性，
表面採平滑設計易清潔，不積存臭味和細菌
實用性：不怕風吹日曬雨淋，堅固耐用外觀優美大方，
適合公眾場所使用
衛生性：特殊空氣對流設計，通風性良好，
特殊除臭消毒劑，清香無異味
靈活性：不受地形場所限制，無須水，電及排水設備
美觀性：色彩多樣，單選，複選多重搭配

TOI TOI 已正式成爲認可的專業
環保處理公司，並且獲得ISO 9001認可證書，此外，
能夠嚴格地執行內部品質稽核，尤其在環保普世
價值概念中，是用戶最佳選擇

TOI TOI 所提供的專業服務：

＊提供高壓專業清洗機清潔廁所內外（客戶可以要求安排
定期服務或每日服務）
＊依據香港政府法規，將污水排放於合法的污水處理廠內
＊提供定期補充藥水服務
＊供應適量的衛生紙
＊使用結束後，提供完善清潔服務
＊２４小時緊急維修服務

產品規格：

尺寸規格：１０６０mm長x
１０６０mm寬x
２４００mm高
重　　量：７０ｋｇ
容　　量：４００公升或以上
設　　備：

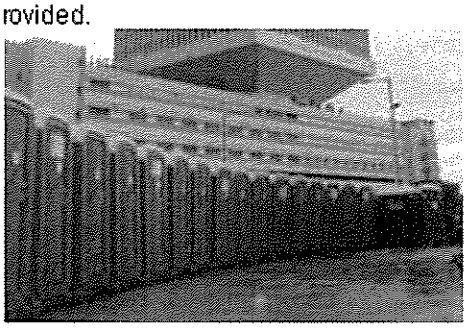
1. 腳踏式藥水沖洗系統
2. 小便斗
3. 衛生紙架
4. 洗手檯
5. 鏡子
6. 衣物掛勾
7. 男女廁所標誌
8. 室內通風管
9. 透氣窗

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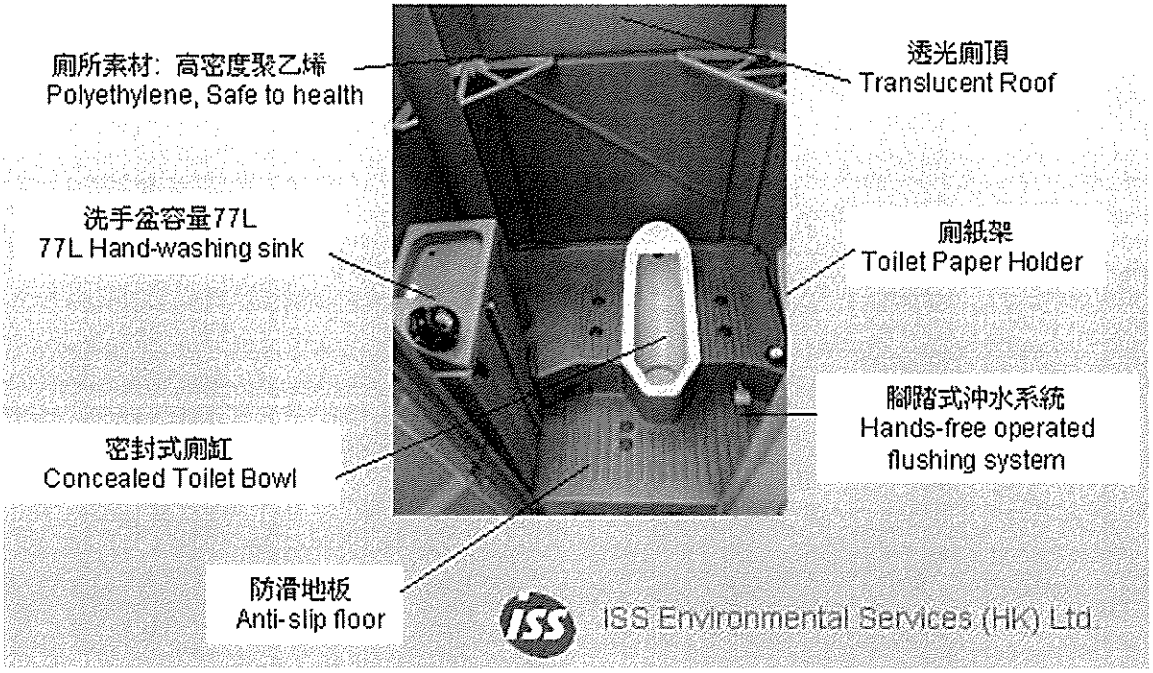
VIP East 東方式貴賓廁

東方式貴賓蹲廁是眾多類型中設備最完善及設計最新穎的款色，其中渦流式沖水的設計更增加了其衛生程度，另外更有多種廁內配套可供選擇。

This is our top of the range model. It provides the maximum hygiene standard due to the special flushing system and the additional toiletries provided.



高度 Height	: 2.29 M (7 ft.)
寬度 Width	: 1.12 M (4 ft.)
縱深 Length	: 1.22 M (4 ft.)
重量 Weight	: 112.5 kg. (empty)
牆身厚度 Wall Thickness	: 3.05mm
款式 Type	: 蹲廁 Squatting
污水缸容量 Holding Tank	: 400 L
清水缸容量 Flushing Water Tank	: 100L 高速渦流式沖水系統, 密封式廁缸 100 L high velocity flushing system with concealed toilet bowl



Appendix C CALCULATION OF SEWAGE GENERATION DURING PEAK PERIOD (FOR FULL CAPACITY SITUATION OF 11,094 NICHES)

1. Sewage Generation for Operation during Peak Period					
Sewage generated by Staff					
Operation Hours	a	=	9	hours	Applicant advised that the operation hours will be 9am to 6pm during festival seasons.
No. of Staff	b	=	22	staff	As advised by the Applicant
Unit Flow rate (for Staff)	c		0.08	m^3/person/day	The UFF of "Commercial Employee" in Table T-2 of reference 1 is adopted.
Total Flow Rate generated by Staff [Note 6]		=	1.76	m^3/day	b x c
Sewage generated by visitors					
Maximum Total Visitors	d	=	5,600	visitors/day	Visitors number per day is advised by the traffic consultant
Unit Flow rate (for visitors)	e	=	0.0026	m^3/person/visit	200ml micturtion[Note 2]+1L flushing[Note 3]+1.4L Handwashing[Note 4]
Percentage of visitors going to toilet	f	=	25	%	Based on the Applicant's current experience, many the visitors will use toilets once for each visit. For the worst-case scenario, 100% of visitors using toilets is assumed.
Total ADWF for Volunteer and Visitor ($ADWF_W$)	g	=	3.64	m^3/day	e x f x g
A. Container toilet installed with jet toilets					
Storage Capacity of Portable (Container Toilet)	h	=	4,000	L	Flush volume is less than 1L. One Container (4,000 L each)will be installed as advised by the supplier.
No of Container Toilet	i	=	1	tanks	(g/h) x 4,000 L/m^3
B. Chemical toilets					
Storage Capacity of a Chemical Toilet		=	400	L / toilet	With reference to the Supplier's Catalogue enclosed in Appendix A of the SIA Report
No. of Chemical Toilets Required		=	10	toilets	

Note

1 Environmental Protection Department (EPD) publication Guidelines for Estimating Sewage Flows (GESF) for Sewage Infrastructure Planning Version 1.0, March 2005

2 Human's micturition is assumed to be 200mL in accordance with p. 3081 of "Magill's Medical Guide", 6th ed., various medical editors, Salem Press, USA, 2011.

3 The volume of flushing system is advised by the supplier of chemical/container toilet.

4 BEAM Plus New Buildings Version 1.2 (8.3L/mins x 10s).

5 It is assumed that 100% of visitors will visit the toilets advised by the Applicant based on the current experience.

6 The total sewage generated will be less than 2m^3/day and so the sewage can be treated by the on-site septic tank/soakaway pit system.

Appendix D CALCULATION OF SEWAGE GENERATION DURING NON-PEAK PERIOD (FOR FULL CAPACITY SITUATION OF 11,094 NICHES)

1. Sewage Generation for Operation during Non-peak Period					
Operation Hours	a	=	7	hours	Applicant advised that the operation hours will be 10am to 5pm during festival seasons.
No. of Staff	b	=	8	staff	As advised by the Applicant
Unit Flow rate (for Staff)	c	=	0.08	m^3/person/day	The UFF of "Commercial Employee" in Table T-2 of reference 1 is adopted.
Maximum Total Visitors	e	=	48	visitors/day	
Unit Flow rate (for visitors)	f	=	0.0091	m^3/person/visit	200ml micturtion[Note 2]+7.5L flushing[Note 3]+1.4L Hand-washing[Note 4]
Percentage of visitors going to toilet	g	=	100	%	Based on the Applicant's current experience, many the visitors will use toilets once for each visit. For the worst-case scenario, 100% of visitors using toilets is assumed.
Total ADWF for Volunteer and Visitor (ADWFW) [Note 6]		=	1.08	m^3/day	b x c + e x f x g

Note

1 Environmental Protection Department (EPD) publication Guidelines for Estimating Sewage Flows (GESF) for Sewage Infrastructure Planning Version 1.0, March 2005

2 Human's micturition is assumed to be 200mL in accordance with p. 3081 of "Magill's Medical Guide", 6th ed., various medical editors, Salem Press, USA, 2011.

3 The estimated toilet flush of 7.5 l/flush made reference to BEAM Plus NB (Version 1.2), published by BEAM Society.

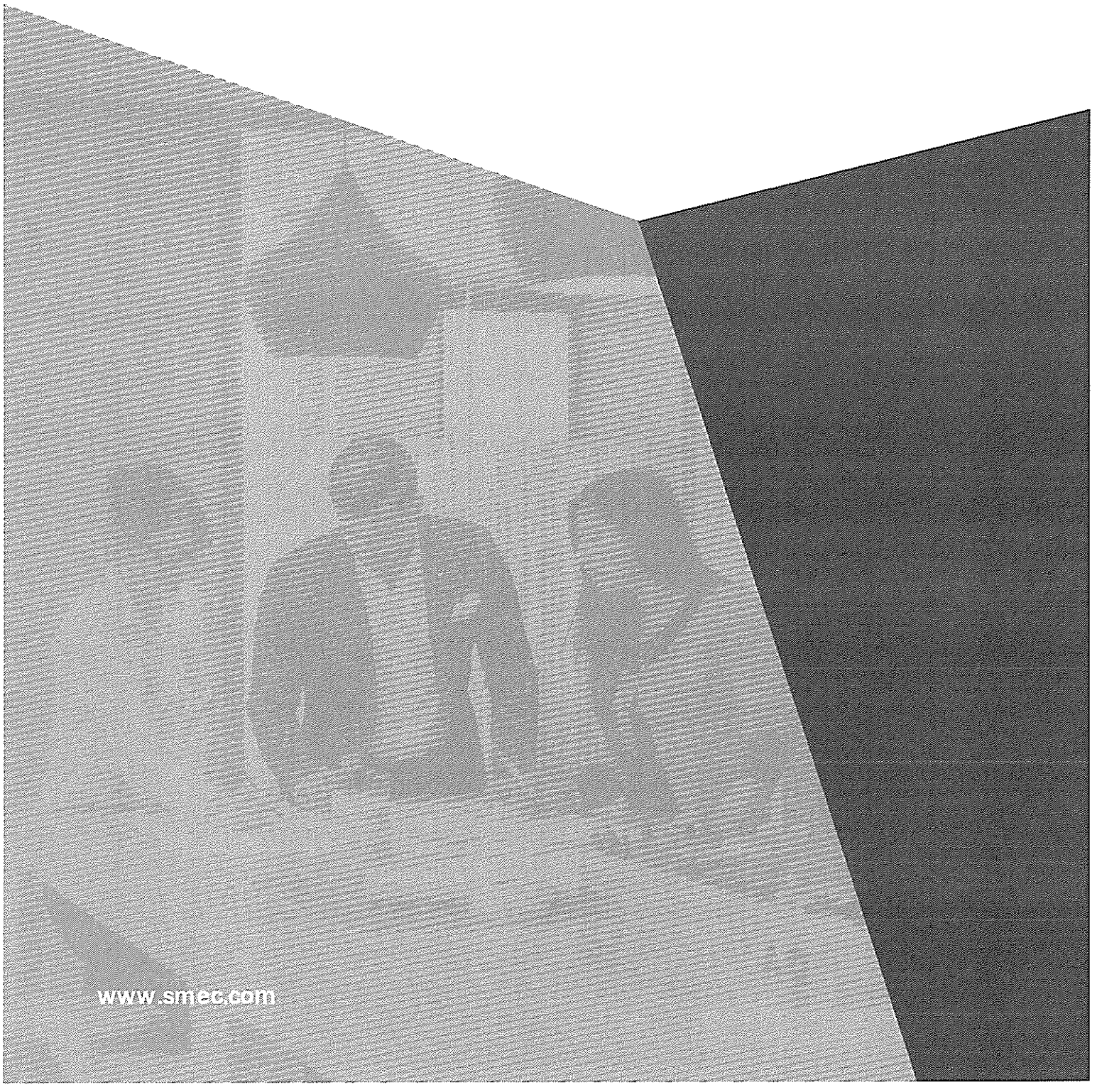
4 BEAM Plus New Buildings Version 1.2 (8.3L/mins x 10s).

5 It is assumed that 100% of visitors will visit the toilets advised by the Applicant based on the current experience.

6 The total sewage generated will be less than 2m^3/day and so the sewage can be treated by the on-site septic tank/soakaway pit system.

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Compilation of a Management Plan by Tin Kwong Lun Yee (天罡隆義) Located at Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT to Facilitate the Application of Columbarium (骨灰龕) Licence Under the Private Columbaria Ordinance, Cap 630

Location : Lot Nos. 1744A – C & 1744F - I in D.D. 132, Tuen Mun, NT

Prepared by LEUNG Wing-tai, William
(Associate Traffic Management Consultant of Toco Planning Consultants Ltd)

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Compilation of a Management Plan by Tin Kwong Lun Yee (天罡隆義) Located at Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT to Facilitate the Application of Columbarium (骨灰龕) Licence Under the Private Columbaria Ordinance, Cap 630

Location : Lot Nos. 1744A – C & 1744F - I in D.D. 132, Tuen Mun, NT

1. Introduction

This paper, which comprises the traffic and crowd management plans and a contingency plan is prepared by the aforesaid Traffic Management Consultant on behalf of the Applicant, Miss YIP Yuk-ping, Rita of Tin Kwong Lun Yee (天罡隆義) located at Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT, for facilitating the application of columbarium licence under the Private Columbaria Ordinance (PC Ord), Cap 630.

2. Background

2.1 Tin Kwong Lun Yee (天罡隆義) (hereafter refer to as TKLY) is located at the low-level hill side of Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT, north west of Po Tin Estate, Tuen Mun and it occupies a site area of about 3137 m^2. Its religion is Tibetan Buddhism Vajrayana and it started to operation as a columbarium in 2010 offering niche spaces for columbarium service. The site is large and is built in a rectangular shape stretching from the south to the north along the western hill side of Kwong Shan Tusen. Three isolated 2-storey columbarium blocks (consist of a total of 6 columbarium halls) are built in a row inside the site with the front of the blocks facing east and a large compound is built in front of the columbarium blocks. The site is easily accessible via Ming Kum Road, Hing Kwai Street and Hing Fu Street, Tuen Mun; and an unnamed slip road leading to the main entrance of the site. Hing Fu Street is a secondary 2-way road, which ends with a cul-de-sac roundabout to the north rear of Po Tin Estate. The Ming Kum Road, Hing Kwai Street and Tsun Wen Road located on the east of Po Tin Estate are 2-lane 2-way roads, which are the main distributors in the area. The unnamed concrete slip road between Hing Fu Street cul-de-sac roundabout and TKLY is about 4 m wide and is suitable for vehicle running, e.g. 24 seat bus. Public Transport Interchange is located underneath Po Tin Estate and public transport services are available on the aforesaid 3 roads to serve the residents and developments in the area. Location map is at **Annex 'D'**. TKLY is in the process of making application to the Town Planning Board through Toco Planning Consultants Ltd under Section 12A of the Town Planning Ordinance (TPOrd) for the rezoning of the site from

"GB" to "G/IC" for the establishment of a religious institution and columbarium. The Applicant also employs A&B Architects Ltd to assist her to design the future layout plan of the site where some alterations and constructions will be made in due course to upgrade the facilities inside the site concerned. Columbarium niche spaces are already built in the 3 columbarium blocks and TKLY proposes to make application for a columbarium housing **11094** niche spaces, **8** of which were sold and interred before 2017-06-30 (pre-cut-off time), **928** of which are sold but not yet occupied and **10158** are available for sale.

2.2 If the application under Section 12A for the rezoning of TKLY site and the application of columbarium licence to the PCLB are approved, the Applicant undertakes to implement a series of stringent measures including the implementation of **visit-by-appointment system through E-booking and to provide free shuttle bus services** together with various tight administrative and operational measures to ensure an orderly and smooth worship inside TKLY during either Ching Ming or Chung Yeung Festivals. As the site consists of about **3137** m^2 and the size of the compound is around **1320** m^2, the site can accommodate a substantial large number of worshippers at a particular period of time to facilitate worshipping activities to be carried out inside the site concerned. In any case, when licence is approved in due course, it is expected more niches will be sold and the niche spaces will be fully occupied gradually the latest by the year of 2025 as proposed by the Applicant, and an increase of worshippers to TKLY will occur during subsequent festive seasons. Should this be the case, enhanced strategic traffic and crowd management measures need to be implemented at TKLY and its vicinity to ensure the safe arrival and departure of worshippers and the smooth running of the event(s).

2.3 As far as transport service is concerned, TKLY is easily accessible by private/public transport. There are at least 5 types of transport facilities for visitors to reach TKLY, namely :--

(a) By free shuttle bus services provided by TKLY (circular route) from TKLY to MTR West Rail Siu Hong Stn North PTI to pick up visitors to TKLY & vice versa
(b) By LRT services via Tin King LRT Stop, Tuen Mun & then walk to TKLY;
(c) By bus to the bus stops at or opposite to Po Tin Estate, Ming Kum Road, Tuen Mun & then walk to TKLY;
(d) By bus to the Po Tin PTI, Tuen Mun & then walk to TKLY; &
(e) By GMB to the GMB Stops at Ming Kum Rd o/s Po Tin Estate & then walk to TKLY.

2.4 Visitors resort to driving to TKLY will be advised in advance that no parking facilities except for disabled/elderly will be provided by the site concerned and they can only drop off visitors at Hing Fu Street cul-de-sac roundabout and then walk up the unnamed slip road to reach TKLY.

2.5 A site reconnaissance (Recce) at TKLY and its surrounding areas was conducted on 2019-06-06 by the author. The author took LRT route 615 from Yuen Long MTR LRT Stop to reach Tin King LRT Stop and then walked to TKLY via Ming Kum Road, Hing Kwai Street, Hing Fu Street and the unnamed slip road outside the site concerned. The walking distance was about 15-20 minutes in normal pace. The Applicant, Miss YIP Yuk-ping was met at TKLY site and adequate information concerning the TKLY columbarium was obtained from her.

2.6 TKLY lies on the lower mid-level of Kwong Shan Tsuen and is built in a rectangular shape stretching from south to north along the hill side and is accessible via an unnamed concrete slip road (about 4m wide) linking with the cul-de-sac roundabout of Hing Fu Street, Tuen Mun. The entrance is located on the south east corner of the site concerned and 3 two-storey columbarium blocks are built inside the site (Block 1 on the south side, Block 2 & 3 are located to the north of Block 1 respectively). The columbarium blocks are built with the front of the 3 columbarium blocks facing east whilst at the rear of the columbarium blocks lies another long and wide alley with the retaining wall lies behind it to the west. A large compound is built in front of the columbarium blocks facing east. The columbarium halls are built in tradition columbarium style and in good serviceable condition. There were no incense burners located inside TKLY and the Applicant stated that no burning of any incense materials be allowed inside the site concerned which is one of their house rules that worshippers need to adhere to.

2.7 For escape route, there are adequate space and staircases for worshippers to enter the columbarium halls and leave vice versa. The layout of the columbarium premises do provide adequate escape/dispersal routes for worshippers to disperse in the event of fire or other emergency situations. Fire extinguishers were seen placing at prominent locations at the entrances of the columbarium halls. The Applicant has commissioned Toco Planning Consultants Ltd as her planner and A&B Architects Ltd as her site designer for some renovations and the latter will prepare an updated layout plan of the site to enhance Applicant's application under Section 12A of TPOrd. In future, the site will consist 3 columbarium blocks, 10 parking spaces, 4 shuttle bus parking spaces and other facilities and the management office will be

located on the G/F of columbarium Block 2. Other necessary service rooms will also be available within the columbarium blocks. The newly designed master layout plan of TKLY is at **Annex 'D'**

3. Basic Information of the Columbarium

The basic information of the columbarium concerned is as follows :-

Name of the columbarium : Tin Kwong Lun Yee (天罡隆義)
Address of the columbarium : Tin Kwong Lun Yee, Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT
Year of commencement of operation : 2010
Name of operator : Miss YIP Yuk-ping, Rita
Status of operator : Tin Kwong Lun Yee Limited
Religion of the columbarium : Tibetan Buddhism Vajrayana

4. Site Information and Building Arrangement

This columbarium is composed of :

- 3 columbarium blocks (a total of 6 columbarium halls)(about 285.2 m^2)(holding capacity : 142.6 persons at any one time)
- No joss paper burner
- No refuse storage room(s) – rubbish will be taken to nearby refuse collection point near to Hing Fu Street cul-de-sac for dumping on a daily basis.
- Other buildings which are facilities necessary for or ancillary to the operation of the columbarium (please specify nature and number)

  (a) Female Toilet : 2 (Female/Male share use)
  (b) Male Toilet : (same as above)
  (c) Disabled Toilet : (No)
  (d) Kitchen : (No)
  (e) Office : (1)

- Other facilities necessary for or ancillary to the operation of the columbarium (e.g. parking facilities, loading and unloading facilities) (please specify nature, area and number) 10 parking spaces, which will be suspended for use during festive days except for disabled and elderly on an advance E-booking system. 4 shuttle bus parking spaces for the parking and running of free shuttle bus services during the festive days for the conveyance of worshippers are available.

5. The holding Capacity of Visitors and Admission Control

The Applicant provides the following information :

- Opening hours : 1000 – 1700 hours
- Opening hours during Ching Ming and Chung Yeung festive periods : 0900 – 1800 hours
- Visitors holding capacity of the 3 columbarium blocks: 142.6 persons at any one time
- Measures to be adopted to ensure that the number of visitors inside the columbarium will not exceed the holding capacity for visitors : the Applicant undertakes to implement a straight **visit-by-appointment system** in future operations (this system will apply to the 2 consecutive weekends before & after the main day together with the main day of either Ching Ming or Chung Yeung Festivals, i.e. **a total of 9 days** to evenly distribute the number of worshippers going to TKLY by pre-arranged appointment) to ensure that only a controllable number of worshippers are allowed to access TKLY for worship, hence the holding capacity of the columbarium concerned will not be exceeded and a safe worship situation is provided, in particular during the peak hours of the main day of either Ching Ming or Chung Yeung Festivals. In addition, free shuttle bus services will be provided to convey visitors to and from TKLY. Details of the aforesaid arrangements are highlighted in subsequent paragraphs.
- Sale agreement and house rule concerning admission control : there is no mention of **admission control** in the sale agreement previously in use, yet such clause will be incorporated in future sale agreement(s) for the compliance of niche buyers. Moreover, the Applicant will set up house rules concerning admission control over worshippers and will inform the niche purchasers about the house rules concerned well in advance prior to Ching Ming and Chung Yeung Festivals. Future sale agreements will be processed through registered solicitor firm and the clause concerned will include the following rules, namely :-
  - (i) Niche purchasers are obliged to adhere to the visit-by-appointment system through E-booking & the admission control to be implemented by TKLY;
  - (ii) No parking facilities will be provided by TKLY except for disabled & elderly with advance visit-by-appointment system through E-booking;
  - (iii) Niche purchasers and his/her accompanying visitors will be assigned and agreed to resort to the use of free shuttle bus services provided by TKLY through visit-by-appointment system by way of E-booking;
  - (iv) Niche purchasers and his/her accompanying visitors need to adhere to the house rules of TKLY for the worship;
  - (v) A notice in Chinese & English will be given to the niche purchasers during the course of signing the sale agreements with the agreed clause and house rules appended on them so that niche purchasers are properly notified about the aforesaid rules; &

(vi) TKLY has the right to deny access if niche purchasers & the accompanying visitors fail to adhere to the clause and house rules concerned.

6. Columbarium Site Area, Holding Capacity, Calculation of Visitors' Attendance & Free Shuttle Bus Services

6.1 TKLY site area = about 3137 m^2
By adopting the BD's CoP the calculation of columbarium factor of 2 m^2 per person, the site concerned in theory can hold up a maximum of :-
3137 m^2 ÷ 2 m^2 = **1569 persons at any one time**

TKLY compound area = about 1320 m^2
Holding capacity of the compound : 1320 m^2 ÷ 2 m^2 = **660 persons at any one time**

The 6 columbarium halls have an area of 285.2 m^2.
Holding capacity = **142.6** persons at any one time.

Visitors attendance : the Applicant will implement the visit-by-appointment system (VBAS) **by way of free shuttle bus services** for the festival main day & 2 weekends before & after the festival main day, i.e. a total of 9 days where the VBAS will be implemented. During Ching Ming or Chung Yeung Festivals the operation hours of TKLY will be bet. **0900 hrs & 1800hrs** daily (9 hrs/day).

Assuming by the year of 2025 the niche spaces of TKLY will be fully occupied and interred, i.e. a total of 11094 niche spaces (ns) occupied. The average niche spaces' visitors are assumed to be 4 visitors per niche. By calculation the daily visitors' attendance amount the 9 days period in average is :-

11094 ns x 4 visitors/ns ÷ 9 days = 4931 visitors/day
4931 visitors ÷ 9 hrs = **548 visitors/hr**
That is to say the 548 visitors/hr is within the holding capacity of the compound of TKLY (660 visitors at any one time).
Remark : The Applicant undertakes to extend the 9-day period to 13-day period in order to diffuse the attendance of visitors/day/hr, if situation dictates.

6.2 In 2018 Ozzo Technology (HK) Ltd was commissioned by the Applicant to conduct a Traffic Impact Assessment for TKLY. To estimate and evaluate the number of forecast worshippers going to TKLY for worship during the **main day of Ching Ming Festival**, reference was made to the daily

person trip observed at a private columbarium development at To Fung Shan in Tai Wai during 2018 Ching Ming Festival by Ozzo. The site layout of this columbarium is similar to TKLY which is situated on a hilly terrain. During Ching Ming and Chung Yeung Festivals, free shuttle bus services between MTR Tai Wai Station and the columbarium site are provided over the operation hours between 0800hrs – 1700hrs (9 hrs) **based on an appointment system**. Visitors are required to make an appointment in advance and reserve a place for the shuttle bus services prior to their visit to the columbarium during peak grave sweeping festival days.

6.3 The referenced columbarium consist of 3000 niches and the observed daily visitor flows (person/day) & the forecast daily visitor flows of TKLY are appended below :-

Observation	Shuttle Bus		Car/Taxi		Total	
	In-flows	Out-flows	In	Out	In	Out
Observed Daily Visitor In-flows (persons/day) at the surveyed columbarium (Festival Main Day)	1467	1493	41	2	**1508**	**1495**
TKLY with 11094 niches by 2025						
Forecast Daily Visitor In-flows (persons/day) at TKLY (Festival Main Day)					**5577**	**5529**

6.4 By the above survey, it indicates that a daily demand of around **5577** visitors are anticipated going to TKLY during the Ching Ming Festival main day, i.e. an average of 620 visitors/hr between 0800 hrs – 1700 hrs, a period of 9 hrs. An hourly limit of **620** visitors will be assigned, i.e. a total of **5580 visitors per day.**

Formula : 1508 visitors x 11094 ns ÷ 3000 ns = 5577 visitors/day
(i.e. 5577 visitors/day ÷ 9hrs = 620 visitors/hr)

This calculated number of 620 visitors/hr is about the same calculated number of 548 visitors/hr as mentioned in para. 6.1 and both are within the holding capacity (660 persons at any one time) of the compound of TKLY.

6.5 As per the above figure calculated by Ozzo, around 97.3% of the daily person trips use the free shuttle bus services for arriving/departing the surveyed columbarium in Tai Wai during Ching Ming Festival main day. Out of the remaining 2.7% of daily trips, only one car trip was recorded and all others are taxi trips, which indicated that majority of the worshippers resorted to the use of free shuttle bus services through advance booking.

6.6 In this application, the Applicant also proposes to provide free shuttle bus services to convey worshippers to & from TKLY for worship and the shuttle bus services will also cover **9 days**, which span across the Festival period, i.e. the main day plus 2 consecutive weekends before and after the main day. In the Traffic Impact Assessment prepared by Ozzo the following modal splits for visitors accessing TKLY are assumed :-

Mode	**Percent**
Shuttle Bus	95%
Car/Taxi	3%
Public transport/walk	2%
Total	100%

6.7 Based on the assumed model splits, the amount of visitors going to TKLY by different modes are highlighted in the following Table :-

Mode	Visitor In-flows/hr	Veh In-flows(trips)/hr	Visitor Out-flows/hr	Veh Out-flows(trips)/hr
Shuttle Bus	590 (620 visitors x 95% ÷ 100%)	25 (590 visitors ÷ 24 seat shuttle bus)	590	25
Car/Taxi	21	6	21	6
Public Transport/Walk	13	-	13	-
Total	**624**	**31**	**624**	**31**

Note : The shuttle bus trip is based on the 24-seat shuttle bus services
The car/taxi occupancy is based on average occupancy of 3.5 persons per vehicle.

The **624** visitor in-flows does not exceed the holding capacity of the TKLY compound (**660** visitors at any one time)

6.8 The shuttle bus services will be provided by TKLY to convey worshippers from MTR West Rail Siu Hong Station North PTI to TKLY site and vice versa. The intended shuttle bus routes, the distance between TKLY & MTR West Rail Siu Hong Station North PTI, the journey time, vehicle trips; and pick up and set down locations are highlighted below :-

(i) Routeing (circular) : Shuttle bus parking bay i/s TKLY > unnamed concrete footpath o/s TKLY > Hing Fu St roundabout > Hing Fu St > Hing Kwai St > Ming Kum Rd > Tsing Tin Rd > Tuen Mun Rd > Lam Tei Interchange > Siu Hong Stn North PTI general layby > Lam Tei Interchange > Tuen Mun Rd > Tsing Tin Rd > Ming Kum Rd > Hing Kwai St > Hing Fu St > Hing Fu St roundabout > Unnamed concrete footpath o/s TKLY > shuttle bus parking bay i/s TKLY.

(ii) Distance : From TKLY to MTR Siu Hong Stn North PTI = **4km**
From MTR Siu Hong Stn North PTI to TKLY = **4.6km**

(iii) Journey time : From TK LY to MTR Siu Hong Stn North PTI
4km ÷ 50km/hr x 60 min = 4.8 min
From MTR Siu Hong Stn North PTI to TKLY
4.6km ÷ 50km/hr x 60 min = 5.5 min
Circular trip = 10.3 min (hence, each trip will be around 15 minutes including pick up/set down of visitors)

(iv) Accordingly 1 shuttle bus can run 4 circular trips w/i one hour bet. TKLY & MTR West Rail Siu Hong Stn North PTI, hence TKLY needs to provide **6 - 7 shuttle buses** in order to run the 25 trips/hour for the conveyance of 590 visitors/hr to TKLY for worship.
Formula : 60 min ÷ 15 min = 4 trips/hr
24-seat bus x 4 trips/hr = 96 visitors/hr (1 shuttle bus)
96 visitors x 7 vehs. = 672 visitors/hr

(v) Pick up/set down locations : (a) At the shuttle bus parking bay i/s TKLY
(b) At the general layby at MTR West Rail Siu Hong Stn North PTI (sketch at **Annex 'D'**)

7. Traffic and Public Transport Arrangement

TKLY is accessible via Ming Kum Street, Hing Kwai Street, Hing Fu Street and an unnamed concrete slip road linking with the Hing Fu Street cul-de-sac roundabout by the north west side of Po Tin Estate, Tuen Mun. During festive days worshippers resort to the use of public transport can take LRT to Tin King LRT Stop or buses/GMBs to Ming Kum Street o/s Po Tin Estate and then walk to TKLY through the aforesaid roads. The walking distance from these locations to TKLY is about 15 - 20 minutes.

7.1 Bus Routes : 58M, 58P, 58X, 258D, 258S, 258X, 260X, 960, 960A 960B, 960X & 961P

Green Mini-Bus Routes : 40, 44A, 44A1 & 44B

LRT Routes : 505, 507, 615 & 615P

7.2 The routes available to access TKLY are :-

1st route : Take the free shuttle buses provided by TKLY via advance E-booking
Routeing (circular) : Shuttle bus parking bay i/s TKLY > unnamed concrete footpath o/s TKLY > Hing Fu St roundabout > Hing Fu St > Hing Kwai St > Ming Kum Rd > Tsing Tin Rd > Tuen Mun Rd > Lam Tei Interchange > Siu Hong Stn North PTI general layby > Lam Tei Interchange > Tuen Mun Rd > Tsing Tin Rd > Ming Kum Rd > Hing Kwai St > Hing Fu St > Hing Fu St roundabout > Unnamed concrete footpath o/s TKLY > shuttle bus parking bay i/s TKLY.

2nd route : MTR (MTR Yuen Long Stn Exit 'G') >
LRT Route 615 at MTR Yuen Long LRT Stop >
LRT Route 615 stop at LRT Tin King Stop>
Walk along Ming Kum Rd western pavement towards north >
Walk along Hing Kwai St western pavement towards north >
Turn left onto the southern pavement of Hing Fu St & walk towards west to the Hing Fu St cul-de-sac roundabout >
Go up the unnamed concrete footpath linking with Hing Fu St cul-de-sac roundabout to reach TKLY

3rd route : By buses/GMBs to Po Tin PTI/bus stops on Ming Kum Rd o/s Po Tin Estate >
Walk along the aforesaid roads all the way to TKLY

7.3 A copy of the bus routes, green mini-bus routes & LRT routes is at **Annex 'A'**.

8. Special Traffic Arrangement for Tin Kwong Lun Yee, Tuen Mun

8.1 To minimize traffic impact at Ming Kum Road, Hing Kwai Street and Hing Fu Street, the Applicant will evenly distribute and arrange worshippers to visit TKLY for worship over the 9 days period, which span across either Ching Ming or Chung Yeung Festivals period (i.e. 2 consecutive weekends before & after the festive main day plus the main day) so that an orderly and smooth worship can take place at TKLY without causing any severe traffic disruption in the vicinity of Po Tin Estate and its nearby road network. In addition, the Applicant will provide free circular shuttle bus services to convey worshippers from MTR West Rail Siu Hong Station North PTI to TKLY for worship and vice versa so that disruption to traffic is kept to the minimal. A series of measures will be implemented by TKLY as follows :-

(i) A **visit-by-appointment system** will be used whereby visitors will be arranged to reserve a place for the shuttle bus in order to come to TKLY according to a pre-arranged time slot so that a balanced control of visitors can be achieved. Worshippers will be contacted in advance by way of email/SMS/Whatsapp/phone about this pre-arranged time slot arrangement & the use of free shuttle bus services. Entry permits will be sent to respective niche purchasers via mail/email/Whatsapp for identifying their validity to use the free shuttle bus services and entry to TKLY for worship according to the pre-arranged date and time slot;

(ii) TKLY will elongate the opening hours of the site on festival days in order to diffuse worshippers;

(iii) A new clause as per paragraph 5 bullet point 5 will be included in the future usage agreements for the columbarium niches to comply with that no parking facilities be available for worshippers except for disabled/elderly and they are required to reserve the shuttle bus services provided by TKLY to arrive and depart the site concerned. The minority that do not use the free shuttle bus services are encouraged to use public transport services. Worshippers also need to adhere to the admission control that may be implemented by TKLY on site and the house rules. Worshippers will be notified in advance prior to festive days that they need to adhere to the specifications written on the purchase agreements regarding the above and TKLY has the authority to deny access;

(iv) In addition, notices, emails and advertisements will be posed to inform public about the special traffic arrangements;

(v) TKLY will also put up directional signs at various key locations such as the pavement o/s LTR Tin King Stop, Po Tin PTI, Bus/GMB Stops at Ming Kum Road, the pavement of Hing Kwai Street and Hing Fu Street, Hing Fu Street cul-de-sac roundabout and the unnamed concrete slip road leading to the site to guide worshippers to the columbarium; &

(vi) TKLY will also deploy sufficient staff and security guards at the Hing Fu Street cul-de-sac roundabout to guide and assist worshippers to alight from cars or taxis and then guide them to go up the unnamed concrete slip road to reach TKLY. Drivers of driven cars will be reminded on the spot not to park their cars illegally on Hing Fu Street so as to avoid causing traffic disruption.

8.2 Apart from implementing the shuttle bus services and the visit-by-appointment system, TKLY will also implement **admission control system** at its compound where staff and security guards will be deployed thereat to implement the system, in particular during the peak hours of the main day so that only a controllable number of worshippers can be released to go inside the columbarium halls for worship in according to the holding capacity of the columbarium halls. The following will be introduced, namely :-

(i) An admission control by way of **tidal flow system** using ropes or tapes to control/release the worshippers to access the columbarium halls at the 3 blocks will be adopted at the compound inside TKLY where a **holding area** will be set up thereat to allow worshippers to line up waiting to be released into the respective columbarium halls for worship; &

(ii) TKLY staff and security personnel deployed thereat will maintain close communication with the Command Post of TKLY to ensure a staggered/periodical release of worshippers to enter the columbarium halls for worship.

9. Police Presence

With the straight implementation of shuttle bus services provided by TKLY coupled with the visit-by-appointment system, admission control and various administrative and operational measures, it is anticipated that the worship at TKLY during festive days shall be a self-regulated event without the need of Police participation or intervention. In any case and as a matter of courtesy, the Applicant will inform Tuen Mun Police in advance prior to the commencement of festive seasons the expected numbers of attendance to TKLY during each day of the festive period so that Police can at their own disposal make suitable arrangement, if they deed necessary. Useful telephone contacts is at **Annex 'E'**.

10. Crowd Management Plan Execution

10.1 During the worshipping festivals a substantial number of worshippers will go to TKLY, Tuen Mun for worship, in particular when all the niches are sold and interred in future. In this scenario, it is expected that an increase in the number of worshippers will occur at TKLY during the festive period of Ching Ming/Chung Yeung Festivals and a special crowd management plan is considered necessary to be implemented inside TKLY and its nearby area to ensure the safety of worshippers and the smooth worshipping operation inside the columbarium concerned. In the long term, there might be a gradual decrease in the number of worshippers going to TKLY for worship during festive days, yet the introduction of the aforesaid special crowd management plan should not be neglected on each occasion.

10.2 In addition to the administrative measures that will be implemented by the Applicant as stipulated in this management plan and to ensure a safe and orderly worship inside TKLY, a crowd management plan will be introduced by TKLY to control only a controllable number of worshippers enter the columbarium halls for worship in a safe and orderly fashion. The management of TKLY will supervise the operation in the following manner, namely :-

(i) Firstly, TKLY management will implement the **visit-by-appointment system** through E-booking, i.e. by way of phone/email/SMS/ Whatsapp & newsletters. Staff of TKLY will contact the niche purchasers and inform them with the following information for processing the booking, namely :-

(a) The 9 days period that span across the festive period, i.e. the main day & the 2 consecutive weekends before & after the main day which the niche purchasers can book a day & a specific time for worship within these 9 days;

(b) Ask the niche purchasers to provide the exact number of visitors including the number of accompanying visitors;

(c) Ask them to reserve places for the free shuttle bus services & remind them to adhere to the clause and condition in the sale agreement to resort to the use of shuttle bus service and then arrange booking for them;

(d) Inform them the pick-up point, which will be at the general layby of the MTR West Rail Siu Hong Station North PTI where TKLY staff & security guards will be available at the layby to check their validity before allowing them to get on board the shuttle bus & that shuttle bus will also be available at TKLY site to convey them back to Siu Hong Station PTI for dispersal after

the worship;

(e) A pre-arranged day & time slot will be allocated to each of the niche purchasers & his/her visitors through E-booking (the time slot for the worship i/s TKLY columbarium halls will normally not more than 30 minutes); &

(f) Entry permits with the date & time slot chosen printed on them will be mailed/emailed/Whatsapp to the niche purchasers & the latter has to present the entry permits to staff/security guards stationed at Siu Hong Stn North PTI general layby for checking before they are allowed to take the free shuttle bus services to TKLY; &

(g) Niche purchasers will be informed that TKLY will keep record for the aforesaid visit-by-appointment for ad hoc checking, if necessary and if niche purchasers & visitors fail to comply with the arranged appointment, unless with excusable reason(s), TKLY has the right to deny access;

(h) For disabled/elderly driven cars, the niche purchasers need to book in advance with TKLY for using the car parking spaces (each parking not more than 30 minutes) & TKLY will issue car park labels to niche purchasers either by mail/email/Whatsapp so as to identify their authenticity on site. Niche purchasers need to present the car park labels to staff/security guards deployed for traffic/crowd management at the foot of the concrete slip road/Hing Fu Street cul-de-sac R/A for checking before they are allowed to enter TKLY site; &

(i) Only vehicles carrying disabled/elderly with the issued car park labels will be allowed to access the unnamed slip road heading for TKLY, other visitors arrive by cars need to stop at the roundabout for drop-off and the visitors will then be guided to walk up the unnamed concrete slip road heading for TKLY. Appropriate directional sign with suitable notice attached indicating the aforesaid arrangement will be placed at the aforesaid roundabout/unnamed concrete slip road leading to TKLY to alert/remind visitors.

(ii) Secondly, TKLY will introduce **admission control** over in-coming visitors, including visitors using the free shuttle bus services and those on foot to enter TKLY. A **holding area** will be set up at the large compound in front of the columbarium blocks to hold up the in-coming worshippers. After debus from the shuttle buses at the shuttle bus bay inside TKLY and/or those enter TKLY via the main entrance on foot, they will be guided by staff/ security guards to enter the holding area where they will be arranged to line up in 3

rows, 1 row for 1 columbarium block, and then the worshippers will be released periodically to enter the respective columbarium blocks for worship by way of **tidal flow system** in an orderly and staggered manner depending on the number of worshippers inside the 3 columbarium blocks so that no overflown of visitors inside the columbarium halls will occur. Staff/security guards will be deployed at the holding area to monitor/supervise the release of visitors. Again, staff/security guards will be deployed inside the columbarium halls and outside the 3 columbarium blocks respectively to monitor/supervise the in-flow /out-flow of worshippers. They will use walkie talkie for communication in order to ensure an orderly release of worshippers.

(iii) Worshippers finished the worship on the 1/F of the 3 columbarium blocks and the G/F of columbarium Block 3 will be guided to use the rear exits and ramps to go down to the wide alley behind the 3 columbarium blocks to move south towards the departure area immediately behind the shuttle bus bay where they will be arranged by staff/security guards to wait thereat waiting to get on board shuttle bus to depart TKLY. The leaving worshippers from G/F of the 3 columbarium blocks will be guided by staff/security guards at the compound to head south for the aforesaid departure area waiting for taking the shuttle buses. This arrangement will ensure no conflict between arriving and departing visitors so as to ensure an orderly arrival and departure of worshippers.

(iv) TKLY staff/security guards will be deployed at the main entrance, the holding area, the shuttle bus bay, the departure area behind the shuttle bus bay, the open area in front of the car parking spaces, inside and outside the columbarium blocks and the Hing Fu Street cul-de-sac roundabout to monitor the arrival/departure of worshippers;

(v) Plastic barriers, cones and tapes will be placed at the compound to delineate the holding area, the P/C drop-off area & the arrival/departure routes so that no conflict will occur between waiting worshippers and the arriving/departing disabled/elderly driven cars and the arrival/departure crowd;

(vi) Ad hoc worshippers coming to TKLY for worship without advance E-booking and/or late comers will be told and arranged to wait at the holding area awaiting their turns to enter the respective columbarium halls for worship as priority will be given to those with E-booking;

(vii) Notice attached on directional sign erected at the holding area will inform ad hoc visitors/late comers about the arrangement as stated in item (vi) above;

(viii) Directional signs will be placed inside all columbarium halls to indicate clearly to worshippers the exits of the respective columbarium halls where worshippers can disperse through these exits in a safe and orderly manner;&

(ix) The Applicant will try her very best to arrange the visits to the columbarium by way of visit-by-appointment system to prevent overflown situation to occur at TKLY. Should there be any over-spilling of visitors at TKLY, in particular during the peak hour, visitors will be arranged to line up in single file along the unnamed concrete slip road leading to TKLY waiting to be released into TKLY for worship. Sufficient staff/security guards will be deployed along the access road to monitor/supervise the arriving and departing visitors and to use 'Stop & Go' method to regulate the incoming/outgoing visitors and the incoming/outgoing shuttle bus services so that there will not be any conflict between crowd and vehicles movement and to ensure the safety of all.

10.3 The Applicant and her manager of TKLY should be vigilant for this kind of situation and maintain close liaison with staff/security guards deployed at different key locations inside/outside TKLY for the implementation of the aforesaid arrangement(s). Staff/security guards deployed at the **holding area** will explain to the worshippers the reason for making the tidal flow releasing method in order to ensure a safe and orderly release of people into the respective columbarium blocks periodically. Directional sign with notice specifying the holding area and tidal flow system will also be placed at the compound to notify the worshippers. **Moreover, the Applicant will ensure that visitors be informed well in advance before the commencement of the festive days the possibilities of executing tidal flow system on site for special crowd management during the main day of either Ching Ming Festival or Chung Yeung Festival.**

10.4 All staff/security guards will be equipped with walkie talkie for internal communication.

10.5 Should emergency vehicles, such as ambulance(s), need to access TKLY to deal with any emergency situation concerning worshippers, e.g. sick person case(s), the Command Post will inform staff/security guards deployed within the area about approaching emergency vehicles and if necessary temporarily stopped the tidal flow system, the shuttle bus services, other car movement and help to retreat visitors to the roadside on the unnamed concrete slip road leading to TKLY to facilitate passage of emergency vehicles and offer assistance to emergency services personnel.

10.6 The Applicant will arrange clear directional signs be placed at suitable locations inside TKLY to guide the arrival and departure worshippers. Directional signs will also be placed at the following locations to guide visitors to access TKLY, namely :-

(i) Pavement o/s Tin King LRT Stop;
(ii) Western pavement of Ming Kum Road o/s Po Tin PTI and the bus/GMB Stops on Ming Kum Road o/s Po Tin Estate;
(iii) Hing Kwai Street western pavement towards Hing Fu Street;
(iv) Western Pavement of Hing Kwai Street/Hing Fu Street; &
(v) Hing Fu Street cul-de-sac roundabout.

11. Supply & Distribution of Manpower of Tin Kwong Lun Yee Staff/Security Guards for Both Traffic and Crowd Management

As per **Annex 'B'.**

12. Specific Duties of Tin Kwong Lun Yee Staff/Security Guards for Both Traffic & Crowd Management

As per **Annex 'C'**

13. Security Management

The Applicant undertakes to ensure that sufficient security measures are implemented for TKLY. Aerial overhead surveillance cameras will be installed at the main entrance, mounted on the wall of the 3 columbarium blocks and adequate CCTV cameras will also be installed at vantage locations within TKLY to cover the whole site including the columbarium halls so as to monitor the activities within the site and the CCTV monitor panel with 24 hours recording function will be placed inside the Admin Office, G/F of columbarium block 2 which will be manned by TKLY staff during office hours, in particular during the 9 days period including the main day of either Ching Ming or Chung Yeung Festivals. TKLY closes for business at 1700 hours daily and the 24 hours CCTV with recording system will continue to be turned on to monitor/record activities inside it. The whole perimeter of TKLY is bounded by wall and retaining wall and the Applicant will employ 2 night shift security guards to perform 12 hours night shift duties inside TKLY to prevent trespassing and ensure tight security.

14. Inclement Weather

In the event of inclement weather, such as heavy rain, during the course of the operation, TKLY will ensure that those worshippers remain inside TKLY to avoid the rain are remained in safe locations and those queue up at the holding area will retreat to indoor to avoid the rain and the tidal flow system, if implemented, will cease.

15. Command Post (CP)(指揮中心)

The Applicant and her manager will operate a CP in the Admin Office, G/F of columbarium block 2. It will be commanded by the Applicant and her manager or the senior staff in their absence during the festive days.

16. Location Map of Tin Kwong Lun Yee and Route Map

The location map of TKLY and route map are at **Annex 'D'**.

17. Pictures of Tin Kwong Lun Yee, its Columbarium Halls and Emergency Evacuation Routes

As per **Annex 'F'.**

18. Manpower Deployment

18.1 TKLY private columbarium will employ a manager and sufficient staff to manage the site, in particular for the festive operation(s).

18.2 The Applicant will direct the manager to provide sufficient manpower to meet the daily operational need of TKLY and staff will be deployed on a rotation basis, including daily cleaning, overall administration for the site, provide customer service and guiding to visitors, employ professionals and workers for repair and maintenance of TKLY facilities and buildings. Provide fire safety and security measures for the whole site. First-aid box is available at the Admin Office in case of need. Provide traffic/crowd management measures during Ching Ming and Chung Yeung Festivals. **Manpower deployment and responsibilities of staff and security personnel in details for Ching Ming and Chung Yeung Festivals are at Annex 'B' & 'C'.**

18.3 The Applicant undertakes to provide the following information to the Licensing Board/relevant authorities, namely :-

- Organization chart of future TKLY working personnel, their number, ranking and job charters, area of responsibilities in relation to the columbarium and other ancillary facilities.
- The details of future employed manager.
- To provide fire prevention measures training to staff of TKLY in future, such as to arrange staff to attend first-aid courses provided by Auxiliary Medical Service (AMS) (醫療輔助隊) or to employ AMS personnel to station inside TKLY in order to provide medical services to worshippers during Ching Ming and Chung Yeung Festivals.

- Normally, no repair and maintenance work will be carried out during Ching Ming or Chung Yeung Festival but the Applicant undertakes to employ professionals and workers to standby inside TKLY and to undertake urgent repair and maintenance work during the peak grave sweeping days if there is such an impending need.
- In the future management of TKLY, the management mode will be as follows :-
  (i) Staff will be assigned with their work according to their job charters and they will be supervised by the manager and in his/her absence the most senior staff presence will take over the responsibilities; &
  (ii) Staff will be briefed on a need-to-know basis regarding the daily running of TKLY, the supervision/running of all the facilities and services to be provided to members of the public. The Applicant will ensure all staff know their own roles and duties and ad hoc meetings will be convened by the Applicant or her manager to discuss and evaluate current issues regarding the quality running of TKLY. The Applicant will ensure the manager and all staff are conversant will the Management Plan and Contingency Plan of TKLY so that they can take immediate and appropriate action in dealing with different types of incidents that may occur in relation with TKLY.

19. Contingency Plan for Fire or Other Emergency Situations To Be Executed by Tin Kwong Lun Yee in compliance with Section 97(f) of the Private Columbaria Ordinance Cap 630

19.1 In accordance with Section 97(f) of the Private Columbaria Ordinance, Cap 630, the Applicant of TKLY is required to submit a 'Contingency Plan in the event of fire or other emergency situations', in addition to other management plans, to the Licensing Board for scrutiny in relation to her application of Columbarium Licence for TKLY.

19.2 In relation to the Applicant's application to the Licensing Board for a Columbarium Licence, the following contingency plan is hence compiled in compliance with the aforesaid Ordinance in order to enhance the successfulness of the application, namely :-.

(a) **Fire Prevention Execution**

The Applicant will ensure the adoption of all fire prevention measures as per Fire Service Department requirement.

(b) **Emergency Evacuation Plan**

An emergency evacuation plan will be prepared by the manager of

TKLY as directed by the Applicant for TKLY site and its columbarium halls and all staff will be briefed to be conversant with the plan so that they can assist worshippers in quick evacuation in case of emergency. The followings are the emergency procedures to be adopted by TKLY, namely :-

- In the event of fire, alert others by shouting "Fire" & report the fire by dialing '999' and give the name & address of TKLY to Police & FSD.
- If it is safe to do so, remove combustibles away from fire.
- When the magnitude of fire is small & it is safe to do so, use fire extinguishers to put out the fire. If the fire is large or uncontrollable, immediate evacuate all visitors out of the fire compartment/floor.
- After all personnel have been evacuated, close the door of fire compartment/floor and evacuate all visitors to the **designated assembly point.**
- In the event of emergency during festive days manpower deployed at key locations at TKLY will assist patrons in evacuation to the **designated assembly point set at the Basketball Court by the east side of Hing Fu Street cul-de-sac roundabout.**
- In emergency situation(s) staff/security guards deployed inside and outside the 6 columbarium halls of TKLY will immediately guide/direct worshippers to leave the respective columbarium halls to the compound and leave via the main entrance of TKLY.
- Leave TKLY via the unnamed concrete slip road to go downhill to Hing Fu Street cul-de-sac roundabout and to the designated assembly point set at the Basketball Court, Hing Fu Street.
- Staff in the Admin Office will exit the office and leave the site as quickly as possible.
- All shuttle buses stationed at the shuttle bus bay will be driven down to Hing Fu Street for temporary parking.
- All visitors' cars parked w/i TKLY will be asked to drive the cars down to Hing Fu Street as quickly as possible.
- The Applicant will ensure the emergency evacuation route within TKLY is free of obstruction at all times.
- The Applicant will ensure that all her staff deployed will be conversant with the Management Plan & the Contingency Plan,

all evacuation routes from the 3 columbarium blocks to the designated assembly point, and the locations and operation of the fire extinguishers.

- The Applicant will liaise with Police/FSD firemen deployed at scene for providing information and assistance.

(C) **Fire Service Installations/Fire fighting Equipment/Storage of Joss Materials**

- The Applicant will ensure all fire service installations and equipment provided for TKLY including the 6 columbarium halls will be maintained in efficient working order.
- The Applicant will employ a Registered Fire Service Installation (FSI) Contractor for all maintenance, alterations and additions for TKLY including the columbarium.
- The Applicant will employ the Registered FSI Contractor to prepare the **fire escape route plans** for TKLY including the columbarium halls.
- The Registered FSI Contractor shall issue Certificate(s) of Fire Service Installations and Equipment (FS 251) to the Applicant with copies forwarded to the Director of Fire Services via the respective Regional Office of the Licensing and Certification Command within 14 days after completion of works.
- A Certificate of Compliance (FSI/314A or FSI/314B as appropriate) will be submitted by the responsible Registered FSI Contractor to the Director of Fire Services via the respective Regional Office of the Licensing and Certification Command for the alteration and addition works.
- Portable firefighting equipment of the approved type will be provided by the Applicant for TKLY, namely :-
  (i) Six x 9L water type fire extinguisher(s) at the columbarium halls; &
  (ii) Six x 4.5kg CO2 gas type fire extinguisher(s) at the columbarium halls.

- The Applicant will also ensure the implementation of the following measures, namely :-
  (i) All fire extinguishers are in good working condition, be kept clear from any obstruction, clearly indicated as

regard to their locations and methods of operation and be inspected by Registered FSI Contractor at least once every twelve months;

(ii) Emergency lighting shall be provided for TKLY including the columbarium halls;

(iii) All exits will be suitably indicated by illuminated signs and if the exit are out of sight to any location within TKLY including the columbarium halls, suitable directional signs in the same dimensions as the exit signs shall be provided to assist patron to identify the exits in the event of an emergency;

(iv) All combustible materials used as altars, false ceilings, partitions or wall furnishings inside the columbarium halls should conform with FSD required standard;

(v) All means of escape routes will be kept free from obstruction;

(vi) Access route will be provided for FSD to reach the columbarium;

(vii) A suitable store room or cabinet should be provided for the storage of joss materials, if any (there will be no burning of incense materials i/s TKLY permitted, hence, there will not be any store room built to store joss materials by TKLY);

(viii) No kerosene & lamp oil will be kept inside TKLY as no burning of joss sticks and incense materials are permitted inside TKLY site; &

(ix) No storage of any dangerous goods exceeding the exempt quantity in accordance with the Dangerous Goods (General) Regulations, Cap 295B.

(d) To further adhere to the FSD fire prevention requirement, the Applicant undertakes to appoint the manager as the **Fire Security Manager** (FSM) for TKLY.

19.3 The 6 columbarium halls situated within TKLY are equipped with fire extinguishers. The Applicant undertakes to employ fire contractor to conduct evaluation of fire precaution measures for TKLY including the columbarium halls in order to upgrade the fire prevention measures that need to be put in place in order to comply with the FSD fire regulations

as well as to comply with the Application Guidelines regarding fire prevention.

19.4 The Applicant undertakes to install CCTV system inside TKLY to monitor the activities inside the site, especially for activities during festive days. The CCTV monitor panel with 24-hour recording function will be installed in the Admin Office on the G/F of columbarium block 2 for staff to monitor the activities inside TKLY.

19.5 The Applicant undertakes to set up house rules and ensure no burning of incense materials be carried out inside the columbarium halls as well as inside the site during the course of worship. Worshippers will be seriously reminded about this rule.

19.6 The Applicant will ensure that fire equipment such as fire extinguishers, in good working order, be placed at appropriate and easy-to-reach locations at all the columbarium halls and other suitable places within TKLY to serve as fire prevention measures.

19.7 The Applicant will direct the manager to set up a fire prevention team in dealing with the break out of fire. **Fire escape route floor plans** concerning escape routes to be prepared by the registered fire contractor concerned will also be affixed at prominent locations within TKLY including the columbarium halls, serving as a clear guide for fire escape. The fire escape routes will be checked periodically to ensure no obstruction is caused to the routes, in particular prior to the commencement of the festive seasons.

19.8 The Applicant will ensure that during festive days staff/security guards on duty are equipped with walkie talkie for easy communication.

19.9 The manager will set up a command post (CP) at the Admin Office in order to monitor the worshipping operations.

19.10 AMS (醫療輔助隊) personnel will be employed to station inside TKLY to provide first-aid services to worshippers. First-aid box is available inside the Admin Office.

19.11 The Applicant undertakes to adhere to the Fire Safety Requirements for Private Columbaria as stipulated by the Fire Service Department (FSD) which includes the Guideline for 'Fire Safety Plan' of Private Columbaria (PC), Fire Safety Instruction – for PC staff and Information required in Fire/Emergency Evacuation Route Plan'.

Fire Security Manager (FSM)

19.12 The manager of TKLY will be appointed as the FSM and he/she is responsible for the following responsibilities, viz :-

- Maintain up-to-date list of Fire Prevention Team (to be reviewed annually) and to liaise with Fire Protection Command of the FSD to arrange training in fire-fighting and fire prevention for the team e.g. the proper use of fire extinguishers
- To liaise with the registered fire contractor concerned to conduct periodical check regarding fire prevention measures adopted by TKLY
- Liaise with the registered fire contractor concerned to ensure fire escape route plans for TKLY are well prepared and to display them at appropriate locations within the site
- To action in the event of fire
- At the end of working period ensure all electrical appliances are switched off and/or unplugged as necessary
- Check that inflammable material is properly stored, if any
- Ensure fire prevention measures are well in place within TKLY
- To check fire preventing equipment in good working order regularly and escape routes are not obstructed, especially prior to the festive days
- Arrange fire drill to be carried every six month
- Brief staff/security guards about fire prevention/fire-fighting and the locations of the fire extinguishers before the commencement of every worshipping season.

Immediate Action on Discovery of Fire

19.13 The person who discovers the fire will :-

- Raise the Alarm by shouting "FIRE" "FOH CHUK (火燭)" .
- Take all possible action to extinguish or contain the fire

  N.B. DO NOT USE WATER OR SODA ACID EXINGUISHERS AGAINST ELECTRICAL FIRES UNTIL BEING TOLD THAT THE ELECTRICAL CURRENT HAS BEEN SWITCHED OFF BY THE PERSON WHO DID SO.
- Ensure that the FSM is immediately informed of the outbreak of fire. The responsibility to request for the assistance of FSD, through the '999' system, will rest with the FSM, except in his/her absence, the most senior staff present at the scene of fire takes over the responsibility.

Action by FSM

19.14 In the event of fire, the FSM will take the following actions, viz :-

- Ensure to dial "999" to call for Police and FSD assistance.
- To dispatch all available staff, fire prevention team and security

personnel to the scene of fire to assist in fire-fighting operations.

- Instruct staff/security guards to arrange immediate and orderly evacuation of worshippers through the escape routes and leave TKLY through the main entrance and to leave quickly downhill via the unnamed concrete slip road to reach Hing Fu Street cul-de-sac roundabout and then to the **designated assembly point** set at the Basketball Court located by the east side of the roundabout.
- Arrange the air-conditioning system of the 3 columbarium blocks to be switched off, if any.

Action at the Scene of Fire

19.15 Under the command of FSM present at the scene of fire, the fire prevention team, remaining staff and security guards are to :-

- Take all possible action to extinguish or contain the fire but safety be the priority.
- Check if any persons are trapped by the fire within the columbarium halls and office rooms and if necessary try to rescue them.
- Remove all casualties from the scene of fire to safe place for immediate medical treatment to be provided by AMS personnel & ambulance be called immediately.
- TKLY staff will try their best to close all windows and doors in the vicinity of the fire and switch off fan and/or room air-conditioning units.
- Remove all inflammable material, if any.
- FSM to delegate a security guard to meet FSD personnel at the main entrance of TKLY.
- FSM to ensure security guards are deployed to the unnamed concrete slip road and Hing Fu Street cul-de-sac for crowd management.
- If the fire is of a serious nature and/or more than one fire has broken out and that danger is imminent, all persons including worshippers, TKLY staff and security guards will be immediately evacuated from the scene of fire to the designated assembly point set at the Basketball Court, east of Hing Fu Street cul-de-sac.
- FSM is to liaise with Police deployed at the scene for crowd management and to arrange a quick evacuation and orderly dispersal of worshippers away from the fire scene to the aforesaid designated assembly point.
- FSM to liaise with Police and the senior FSD officer attending the fire to ensure all aware of the prevailing danger.

Escape Routes

19.16 The escape routes for worshippers at the 6 Columbarium Halls are :-

- For the 3 columbarium halls located on the G/F of the 3 columbarium blocks, the worshippers will be guided by staff and security guards to leave the respective columbarium halls via the entrances of the columbarium halls to the compound and then retreat south to the main entrance of TKLY, then go downhill via the unnamed concrete slip road to the designated assembly point set at the Basketball Court, east of Hing Fu Street cul-de-sac roundabout.
- Worshippers inside the 3 columbarium halls on the 1/F of the 3 columbarium blocks will be guided/directed by staff/security guards to go down staircases/ramps to the entrance of each columbarium block and to the rear alley behind the columbarium blocks and then disperse towards south to the main entrance of TKLY. Then go downhill via the unnamed concrete slip road to the assembly point located at the Basketball Court, east of Hing Fu Street cul-de-sac roundabout.
- Worshippers at the holding area will immediately be directed to move south towards the main entrance of TKLY and proceed downhill via the unnamed concrete slip road to the aforesaid designated assembly point.
- For the Admin Office and other rooms located inside TKLY, those inside will immediately proceed to the compound and join with other dispersal groups to leave TKLY via the main entrance and go to the aforesaid designated assembly point for assemble.
- Shuttle buses parked at the shuttle bus bay will be driven away by drivers concerned and park the buses temporary at Hing Fu Street awaiting for further order from the Applicant.
- Car owners will as far as possible be informed to drive away their cars down to Hing Fu Street for temporary parking or be directed to drive away after taking back their disabled/elderly.

Removal of Important Documents

19.17 When the severity of the fire is known, removal of important documents placed inside the Admin Office to a safe place such as to the assembly point at Hing Fu Street may be considered. The FSM will direct his/her staff to take such action, if possible and to take care of necessary items.

Fuse Boxes and Fire Fighting Equipment

19.18 It is imperative for the FSM to brief staff to remember that the electric current must be switched off at the fuse box controlling electricity supply to the area of the fire before any attempt is made to extinguish a serious fire or one involving electrical apparatus. The staff must be well aware of the locations of fuse boxes and fire-fighting equipment.

Action During Other Emergency Situations

Action in Person Collapsed, Sick Person and Person Accidental Injured Cases

19.19 Person collapsed or sick person cases :-

- FSM, relevant staff and/or security guards to attend the scene immediate and assess the situation
- Directive be given to remove the person collapsed or sick person to a shaded & spacious area for a rest and call for ambulance
- If first-aid treatment is needed, those who know first-aid will attend to the sick person concerned and AMS personnel stationed inside TKLY will be called to the scene to attend to the sick person.
- Inform CP to call for ambulance, if immediate need is necessary
- Ensure the person collapsed or sick person is escorted to hospital by family members/Police, if possible
- FSM is to ensure security guards continue with their crowd management duties in order to ensure no panic from other worshippers

19.20 Person accidental injured cases :-

- Attend the scene immediate and assess the situation
- Depend on the seriousness of the injuries, do not move the injured
- Inform CP to call for ambulance, if necessary
- Cordon off and contain the scene to ensure no further incidents to occur
- Ensure the injured is escorted to hospital by family members/Police, if possible

Action in Landslide or Building Collapse Cases

19.21 Landslide or building collapse cases :-

- Attend the scene immediate and assess the situation
- Inform the CP and conduct rescue and attend to injured
- CP is to dial "999" to call for Police and FSD and ambulance to attend scene
- If the situation is serious, try as far as possible remove the injured to a safe place waiting for the arrival of ambulance
- Conduct evacuation immediate and tell those uninjured to leave TKLY via the main entrance, unnamed concrete slip road down to the designated assembly point as quickly as possible
- Try to obtain information from the Police regarding relevant Government Department staff to attend scene to evaluate the damaged situation
- FSM to liaise with the senior FSD officer present at the scene of rescue in order to obtain relevant and fresh information

- Try to identify the death, if any and the injured and next action is to inform family members about the incident
- In this type of case, the Application is to ensure that any retaining walls, if any, close to the precinct of TKLY are well maintained in good condition

Nature & Handling of Emergency Situations

19.22 Emergency situations are by no means exhaustive and those common situations are highlighted in the above paragraphs. TKLY staff and security personnel involved in festive operations need to be well trained for handling imminent situations that require prompt attention and be alert at all times when conducting the operations and be prepared to handle emergency situations at short notice. To equip themselves with sufficient knowledge in dealing with sudden incidents, in particular during festive days and to ensure that they comply with the Private Columbaria Ordinance/Application Guidelines.

Useful Telephone Contacts of FSD

19.23 Useful telephone contacts of FSD is at **Annex 'E'**.

20. Measures to ensure Compliance with Licensing Conditions, Guidelines and Code of Practice Stipulated or Issued by the PCLB

20.1 At present, there are only 8 occupied niches inside TKLY and the Applicant use appointment system to arrange worshippers to conduct the worship during festive days. To enhance the successfulness of the application for the columbarium licence and in future when additional niches are permitted to be sold and interred, the Applicant undertakes to implement adequate administrative measures in compliance of the PC Ord, Cap 630 and the application guidelines issued by relevant authorities. To ensure easy control and safety of worshippers, a visit-by-appointment system via phone/Whatsapp/email/SMS/ newsletters for booking the worshipping visits will be introduced including E-booking of the free shuttle bus services across the whole festive period (a total of 9 days). This admission control by way of visit-by-appointment system will be strictly adhered to so as to ensure the smooth running of the festive events. The specific time slot visits' record with details of the niche purchasers, number of their accompanying visitors, the time-in and time-out log & used of free shuttle bus services will be recorded and be kept in the Admin Office of TKLY for ad hoc checking during festive days, if necessary. TKLY will adhere strictly to the visit-by-appointment system & the distribution of visitors to respective columbarium halls by way of tidal flow system so that each columbarium hall will not exceed the permitted capacity at any

one time.
Signs indicating the holding capacities of each columbarium hall will be affixed at prominent location of each columbarium hall for the notice of visitors and such signs will be maintained in good conditions.

20.2 The Applicant will also provide information to worshippers regarding details of the special traffic/crowd management measures that may be implemented by TKLY during the 9 days festive period which span across Ching Ming or Chung Yeung Festivals and any change that might be made to such an arrangement. Signage will also be displayed inside TKLY to remind visitors to follow the house rules during festive days. Directional signs will also be placed at suitable locations inside/outside TKLY to guide the incoming/outgoing worshippers.

20.3 To employ a professional security company so as to provide sufficient security personnel to assist TKLY staff to implement traffic/crowd management measures during Ching Ming and Chung Yeung Festivals.

20.4 Staff and security personnel deployed for the operation will be equipped with walkie talkie for internal communication so as to enhance the efficiency of the festive operation(s).

20.5 The Applicant undertakes to direct the manager to set up a Command Post (CP) at the Admin Office, G/F of columbarium block 2 to monitor and cover the operation(s) during the festival days.

20.6 To implement adequate security measures to ensure the safety of worshippers as well as the columbarium halls and the whole TKLY area. CCTV and Aerial Overhead Surveillance Cameras will be installed inside TKLY to monitor the worshipping activities and the deployment of adequate security personnel to cover the operation(s). Broadcasting system will also be installed inside TKLY to broadcast message to visitors, e.g. the in-flow of visitors arrangement and the staggered release of visitors into respective columbarium halls for worship, if situations dictate.

20.7 No burning of incense materials inside the respective columbarium halls and inside the site will be permitted and worshippers will be reminded about this rule well in advance prior to the festive days. Signs with 'No Burning of Incense Materials' will be affixed at prominent locations inside the columbarium buildings to remind visitors.

20.8 The Applicant will ensure the quick implementation of contingency plan

in case of fire or other emergency situations.

20.9 To employ Auxiliary Medical Service (AMS) (醫療輔助隊) personnel to station inside TKLY for the provision of medical service to worshippers during the festive days.

20.10 The Applicant undertakes to direct the manager to set up plastic mills barriers, cordon tapes and cones at the compound of TKLY to set up the holding area and to delineate the in-flow and out-flow routes of worshippers. To deploy staff/security guards to direct the parking of cars, which carry disabled/elderly into respective car parking spaces and the parking of shuttle buses into the shuttle bus bay; and to assist the debus of passengers from cars/shuttle buses.

20.11 The Applicant undertakes to inform niche purchasers that no parking facilities will be provided by TKLY during the festive periods except for disabled/elderly and they need to book the parking via advance E-booking.

20.12 Worshippers will be reminded to adhere to the use of free shuttle bus services provided by TKLY to access and depart the site and that advance booking via E-booking is required.

20.13 Those minority worshippers who do not use the free shuttle bus services are strongly encouraged to use public transport to access TKLY in order to minimize traffic impact in the vicinity of TKLY.

20.14 In order to improve the condition of the unnamed concrete slip road leading to TKLY, the Applicant proposed to widen the road to provide a 1.5m wide footpath passage for worshippers on foot to and from TKLY; and that there are adequate road width for the travelling of the shuttle buses. Two passing bays along the road will also be built to enhance the smooth running of the shuttle bus services, sketch of the proposed road widening is at **Annex 'D'.**

20.15 TKLY will affix notice at the main entrance informing visitors about the operation hours of TKLY during the whole festive period (a total of 9 days, i.e. the main day and 2 consecutive weekends before & after the main day).

20.16 TKLY will affix at the entrance of each columbarium hall floor plan indicating to the visitors the method of crowd management inside the site including visitors' flow, direction of flow, waiting & line up area(s)/restricted area, staff static posts, AMS post & escape route plans

& assembly point for the notice of visitors.

20.17 TKLY will ensure that notice with the holding capacity of each columbarium hall, in English & Chinese, is affixed at prominent location at each columbarium hall and to ensure that the notices are well maintained for the information of visitors.

20.18 TKLY will ensure that cigarette smoking is not permitted inside the columbarium halls with 'No Smoking' signs affixed at prominent locations.

20.19 TKLY will also provide customer services for bulk belonging bring by the visitors, if necessary.

20.20 At any time according to the volume of visitors implement effective management plan to provide traffic/crowd movement management to ensure safety and orderly worshipping activities inside TKLY.

20.21 To display at prominent location(s) within TKLY the name & telephone number of the staff, who handles enquiries & complaints in relation to TKLY and worshipping activities.

20.22 TKLY will keep record of staff training including contents of the training materials, date of training & names of staff participated in the training and will provide information on the request of the relevant Columbarium Office.

21. Handling of Complaints

To comply with the Private Columbarium Ordinance and the Application Guidelines, the Applicant undertakes to implement a complaint mechanism to handle all complaints in relation to TKLY, namely :-

- Set up a complaint mechanism to deal with all complaints regarding the management and service to be provided by TKLY. The manager or in his/her absence, the most senior officer, will be the overall in-charge and decision maker for all the complaints received. An admin staff will be appointed as complaint handler for all the complaints in relation to TKLY.
- All complaint(s) will be recorded in computer and will be divided into different categories for easy handlings and data processing.
- The complaint handler will be assigned to input information of the complaints in the computer for subsequent handling and investigation.
- The complaint handler will be assigned as investigator for handling complaints and he/she will be responsible for contacting the complainants for enquiries and

investigation of the complaints.

- Channel for receiving complaints – staff of TKLY on receiving a complaint will report it to the complaint handler of Admin Office and details of the complaint will be recorded in the computer including the nature, date & time of the complaint, details of the complainant and the complaint for follow-up action and subsequent reply.
- A performance pledge will be set up regarding period of investigation and the period of response to the complaint. Normally, reply to the complainant will be provided within one month, unless in urgent situation where the reply will be provided within 7 working days or as soon as possible.
- If there is a need to take remedial action, the complaint handler will report the nature/suggestions to the manager and the latter will refer them to the Applicant, who will then direct what kind of action, if appropriate, to be taken as soon as possible in order to maintain/upgrade the quality services provided by TKLY.

22. Financial Plan

The financial plan will be enclosed in a separate envelope which has been marked "Annex to Management Plan Item (11)".

23. Person Responsible for the Implementation and Approval of the Management Plan

The particulars of the person responsible for the implementation of and approving the management plan.

Name:	**Miss YIP Yuk-ping, Rita**
Position:	**Applicant**
Contact No.:	**9871 9555 / 9873 5550**
Email Address:	**ritayukping@yahoo.com.hk**

Submitted for and on behalf of the above-named columbarium

Name:	**Miss YIP Yuk-ping, Rita**
Position:	**Applicant**
Contact telephone no.:	**9871 9555 / 9873 5550**
Email address:	**ritayukping@yahoo.com.hk**
Signature:	*For and on behalf of* **Tin Kwong Lun Yee Limited** 天光隆義有限公司
Date:	*Authorized Signature(s)*

28 JUN 2019

List of Annexes

Annex A	Bus Routes, Green Mini Bus Routes, LRT Routes to Tin Kwong Lun Yee, Tuen Mun
Annex B	Supply & Distribution of Manpower of Tin Kwong Lun Yee
Annex C	Specific Duties of Staff/Security Personnel of Tin Kwong Lun Yee
Annex D	Location Map, Master Layout Plan & Free Shuttle Bus Routes to/from Tin Kwong Lun Yee
Annex E	Useful Telephone contacts of TD, Police, FSD & AMS
Annex F	Pictures of Tin Kwong Lun Yee, its Columbarium Halls, route leading to Tin Kwong Lun Yee from Tin King LRT Stop, Tuen Mun & Emergency Evacuation Route(s)

Annex 'A'

Bus Routes, Green Mini-Bus Routes & LRT Route to Tin Kwong Lun Yee, Tuen Mun

Public Transport	**From**	**To**
Bus Route No.		
58M	Leung King Estate Bus Terminus	Kwai Fong Stn Bus Terminus (Route thro' Ming kun Rd o/s Po Tin Estate, Tuen Mun) (Round Trip)
58P	Kwai Fong Stn Bus Terminus	Tin King Estate (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round Trip)
58X	Leung King Estate Bus Terminus	Mong Kok East Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
258D	Po Tin Estate PTI	Lam Tin Stn (Round trip)
258S	Shan King bus Terminus	Lam Tin Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
258X	Po Tin PTI	Kwun Tong Ferry (Route thro' Ming Kum Rd o/s Po tin Estate, Tuen Mun) (Round trip)
260X	Po Tin PTI	Hung Hom Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)

960	Kin Sang Bus Terminus	Wanchai North (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
960A	Central (Pottinger St)	Hung Shui Kiu (Hung Fuk Estate) (Round trip)
960B	Quarry Bay	Hung shui Kiu (Hung Fuk Estate) (Round trip)
960X	Hung Shui Kiu (Hung Yuen Rd)	Quarry Bay (King's Rd)
961P	Leung King Estate	HKCEC (Round trip)
Green Minibus Route No.		
40	Siu Hang Tsuen	Tuen Mun Town Centre (route thro' Po Tin Estate, Hing Kwai St) (Round trip)
44A	Tuen Mun Stn	Sheung Shui Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
44A1	Po Tin Estate, Tuen Mun	Sheung Shui Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
44B	Tuen Mun Stn	Lok Ma Chau PTI (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
LRT Route		
505	Sam Shing	Siu Hong (Stop at Tin King Stop)

507	Tuen Mun Ferry Pier	Tin King
615	Tuen Mun Ferry Pier	Yuen Long MTR & LRT Stn
615P	Tuen Mun Ferry Pier	Siu Hong

Remarks : The routes are from one location to the other and vice versa.

Annex 'B'

Supply & Distribution of Manpower of Tin Kwong Lun Yee Staff/Security Personnel

For

Traffic & Crowd Management

Supply of Manpower by Tin Kwong Lun Yee Management

Manpower	Applicant & Manager	TKLY Staff	Security Guards
No.	2	13	32

Distribution of Manpower by Tin Kwong Lun Yee Management

Location	Applicant/Manager	TKLY Staff	Security Guards
Command Post	2		
Main Entrance of TKLY		1	2
Unnamed Concrete Slip Rd leading to TKLY/Hing Fu St cul-de-sac R/A		2	2
Unnamed Concrete Slip Rd bet. Hing Fu St R/A & Main Entrance of TKLY			2
Holding Area at the Compound in front of the 3 Columbarium Blks		3	6
Shuttle Bus Bay i/s TKLY facing the Compound		1	2
Departure Area		1	2

behind the Shuttle Bus Bay			
I/s the 6 Columbarium Halls (1 Security Guard in each hall)			6
Open area of the Compound o/s each Columbarium Halls			3
Private Car Park Area i/s TKLY		1	2
Rear Platform & ramps behind Columbarium Blk 1 - 3		2	3
MTR West Rail Siu Hong Stn North PTI General Layby		2	2
Total	2	13	32

Annex 'C'

Specific Duties of Tin Kwong Lun Yee Staff/Security Personnel for Traffic and Crowd Management

Location	Rank	Duties
TKLY area/Command Post	Applicant & Manager 2	• Overall supervision of TKLY site, staff & security guards for traffic/crowd management • Oversee the implementation of the Special Traffic & Crowd Management arrangement for TKLY • To ensure the implementation of the visit-by-appointment & admission control system inside TKLY • To employ professional security company to provide professional security guards for traffic/crowd management for TKLY • To employ professional transport company to provide adequate shuttle buses to conduct the free shuttle bus services bet. TKLY & MTR West Rail Siu Hong Stn North PTI • To ensure the efficient running of the free shuttle bus services provided by TKLY • To command the CP for the command/deployment of duties for traffic/crowd management i/s & o/s TKLY • Act as a point of liaison with Police/FSD, if necessary • Deal with emergency situations • Deal with evacuation situation, if

		required ● Oversee the operation of the CP ● Conduct detailed briefing for TKLY staff/security guards regarding traffic/crowd management prior to the operation ● Coach staff/security guards on traffic/crowd management to be adopted, if necessary inside TKLY ● Brief staff/security guards regarding the handling of emergency situation/evacuation ● Ensure staff vigilance & diligence thro' visits to static locations i/s & o/s TKLY ● Deal with complaints & trespassers ● Deal with reported/ad hoc incidents ● Conduct 'After Action Review' for the operation for future improvement, if required ● Arrange meal break for TKLY staff/security guards
Main Entrance of TKLY	TKLY staff 1 Security guard 2	● To welcome & guide worshippers into TKLY ● To conduct traffic control for in-coming free shuttle buses/private cars with disabled/elderly ● To verify the validity of P/Cs carrying disabled/elderly ● To verify ad hoc visitors & late comers ● To help to implement the admission control system ● To guide visitors to the holding

		area set up at the compound o/s the columbarium blks ● Maintain close radio communication with the CP and staff/security guards deployed at key locations w/i TKLY for crowd management. ● Deal with any ad hoc incidents ● Deal with emergency situations ● Deal with evacuation situation, if required ● To assist Police when called for
Unnamed Concrete Slip Rd leading to TKLY/Hing Fu St cul-de-sac R/A	TKLY staff 2 Security guard 2	● To conduct traffic/crowd management, if required ● To assist free shuttle buses to go up the unnamed slip rd leading from Hing Fu St to TKLY ● To verify ad hoc visitors & assist visitor cars w/o advance booking to stop at the R/A for alighting visitors & guide the vehicles to leave the R/A as quickly as possible w/o causing any blockage at the R/A ● To monitor the in-flow/out-flow of worshippers to and from the TKLY & the R/A ● To liaise closely with those deployed at the entrance for traffic & crowd management ● Give advice to worshippers on enquiries ● Maintain radio communication with the CP regarding the flow of worshippers/vehicles ● Deal with any ad hoc incidents ● Deal with emergency situations ● Deal with evacuation, if required

		• To assist Police when called for
Unnamed Concrete Slip Rd bet. Hing Fu St R/A & main entrance of TKLY	Security guard 2	• To assist shuttle buses going up & down of the unnamed slip rd • To guide/direct visitors to walk up/walk down the unnamed slip rd by the side of the rd in an orderly manner w/o creating any conflict with the flow of shuttle buses & P/Cs carrying disabled/elderly to & from TKLY • To patrol the unnamed slip rd to prevent accidents to occur • Maintain radio communication with the CP regarding traffic/crowd management • To deal with complaints on the spot or refer complaints to Manager to deal with, if necessary • Deal with ad hoc incidents • Deal with any emergency situations • Deal with evacuation situation, if required
Holding Area at the Compound in front of the 3 Columbarium Blks	TKLY Staff 3 Security guard 6	• To assist the Applicant to set up the holding area at the compound in front of the 3 columbarium blks • To arrange the worshippers to line up in 3 rows waiting to be released into the respective columbarium halls for worship (1 row for 1 columbarium blk) • To ensure worshippers line up in an orderly manner w/i the holding area • To implement the tidal flow system, if required

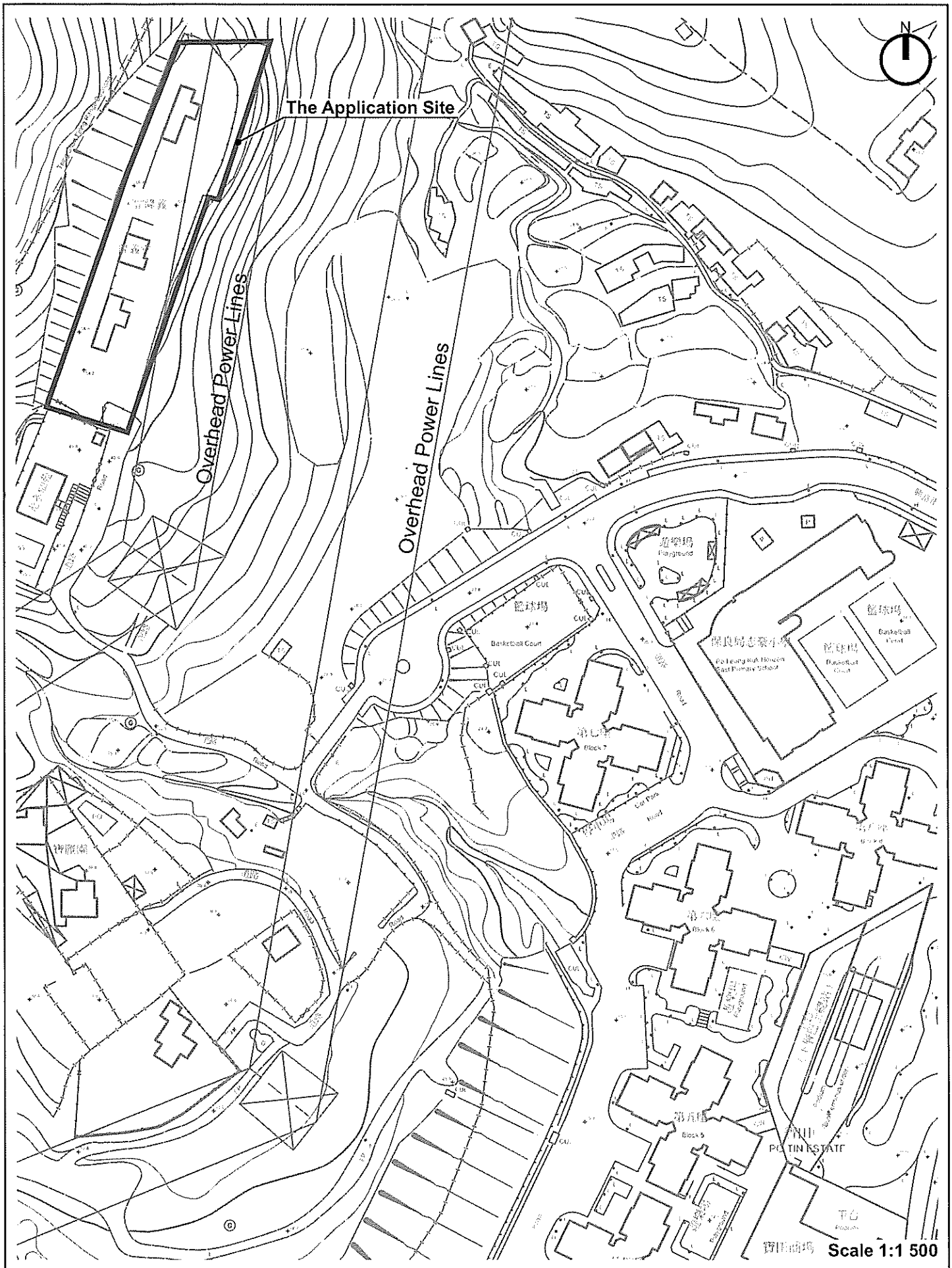
		• To ensure an orderly, steady and staggered release of worshippers into the respective columbarium blks
		• To arrange ad hoc visitors to wait at the holding area awaiting their turns to enter the respective columbarium blks for worship as priority will be given to those visitors with advance E-booking • Maintain radio communication with CP regarding crowd management i/s TKLY • Maintain radio contact with other staff/security guards deployed inside the columbarium halls to ensure no overflown of worshippers i/s the respective columbarium halls • Deal with complaints on the spot or refer complaints to Manager to deal with, if necessary • Deal with ad hoc incidents • Deal with any emergency situations • Deal with evacuation situation, if required
Shuttle Bus Bay i/s TKLY facing the Compound	TKLY Staff 1 Security guard 2	• To guide/direct shuttle buses to park at the parking spaces w/i the shuttle bus bay • To assist worshippers to alight from the shuttle buses & guide/direct them to walk towards the holding area set up at the compound o/s the 3 columbarium blks • Assist departing shuttle buses to

		leave the shuttle bus bay w/o causing any traffic/crowd conflict ● Maintain radio communication with the CP regarding the movement of worshippers within TKLY ● Deal with any ad hoc incidents ● Handle enquiries & complaints, if any ● Deal with casualty/injuries, if any ● Deal with any emergency situations ● Deal with evacuation situation, if required
Departure area behind the Shuttle Bus Bay	TKLY Staff 1 Security guard 2	● To arrange departing worshippers to wait at this gathering area where they can line up thereat waiting to get on board shuttle buses to leave TKLY for Siu Hong Stn North PTI for dispersal ● If the aforesaid area is fully occupied, arrange the worshippers to line up in single file at the rear alley behind the columbarium blks waiting for their turns to take the shuttle buses to leave TKLY ● Maintain radio communication with CP & other post duties regarding crowd management ● Deal with any ad hoc incidents ● Deal with sick/injuries, if any ● Deal with any emergency situation ● Deal with evacuation situation, if

		required
I/S the 6 columbarium Halls (1 security Guard in each Hall)	Security guard 6	• To monitor the worshipping activities i/s the respective columbarium halls • Worshippers finished worship on the 1/F of the 3 columbarium blks are guided/directed to leave the columbarium halls via the rear exits and walk down the ramps and staircases to the rear alley behind the columbarium blks & walk towards south towards the shuttle bus bay for taking the shuttle bus to leave TKLY • Worshippers finished worship at the 3 columbarium halls located on the G/F of the columbarium blks are guided to leave via the respective columbarium halls' entrances to the compound where they will be guided to walk south towards the shuttle bus bay for taking shuttle by to leave TKLY • To maintain radio communication with the CP regarding crowd management and those deployed at the holding area so as to ensure no overflown of worshippers i/s the respective columbarium halls • To ensure no burning of incense materials i/s the respective columbarium halls • Deal with any ad hoc situations • Deal with emergency situations • Deal with evacuation situation, if

		required
Open area of the Compound o/s each columbarium hall	Security guard 3	• To monitor the in-flow & out-flow of worshippers to/from respective columbarium halls • To ensure no conflict bet. Arriving & departing worshippers • To assist the drop-off of disabled and/or elderly at the car parking area & arrange the parking of P/Cs into the respective parking spaces • Maintain close radio communication with the CP regarding crowd management • To assist others deployed at the holding area for crowd management if called upon for • To take action in the event of emergency evacuation
Private Car Park Area i/s TKLY	TKLY Staff 1 Security guard 2	• To assist disabled/elderly to get off vehicles • To guide/direct P/C drivers to park cars into the allocated parking spaces • To ensure vehicles parking are conducted in a safe condition • To ensure the P/C drivers to leave TKLY on time (the allocated veh. parking time is not more than 30 minutes) • To maintain radio contact with the CP regarding the vehicle parkings and movement of worshippers • Be prepared to be re-deployed to other location(s) inside TKLY area for crowd control

		• To take action in emergency situation(s)
Rear Platform & ramps behind Columbarium Blk 1 - 3	TKLY Staff 2 Security guard 3	• To monitor the out-flow of leaving worshippers • To ensure an orderly dispersal of worshippers onto the rear alley behind the columbarium blks & that worshippers walk in the direction towards south for the shuttle bus bay area • Maintain close radio communication with CP regarding the dispersal of worshippers • Deal with ad hoc incidents • Deal with emergency situations • Deal with evacuation, if required
MTR West Rail Siu Hong Stn North PTI General Layby	TKLY Staff 2 Security guard 2	• To assist Shuttle Bus Service from Siu Hong Stn North PTI to TKLY • To verify the validity of worshippers who take the free shuttle bus services • Those w/o valid permits issued by TKLY will be denied using the free shuttle bus services • To assist worshippers to line up in an orderly manner at the general layby at the PTI for taking the free shuttle bus services • To guide/direct worshippers regarding dispersal at the PTI • To deal with ad hoc incidents • To maintain close contact with the CP regarding all matters in relation to the free shuttle bus services provided by TKLY.



Annex D

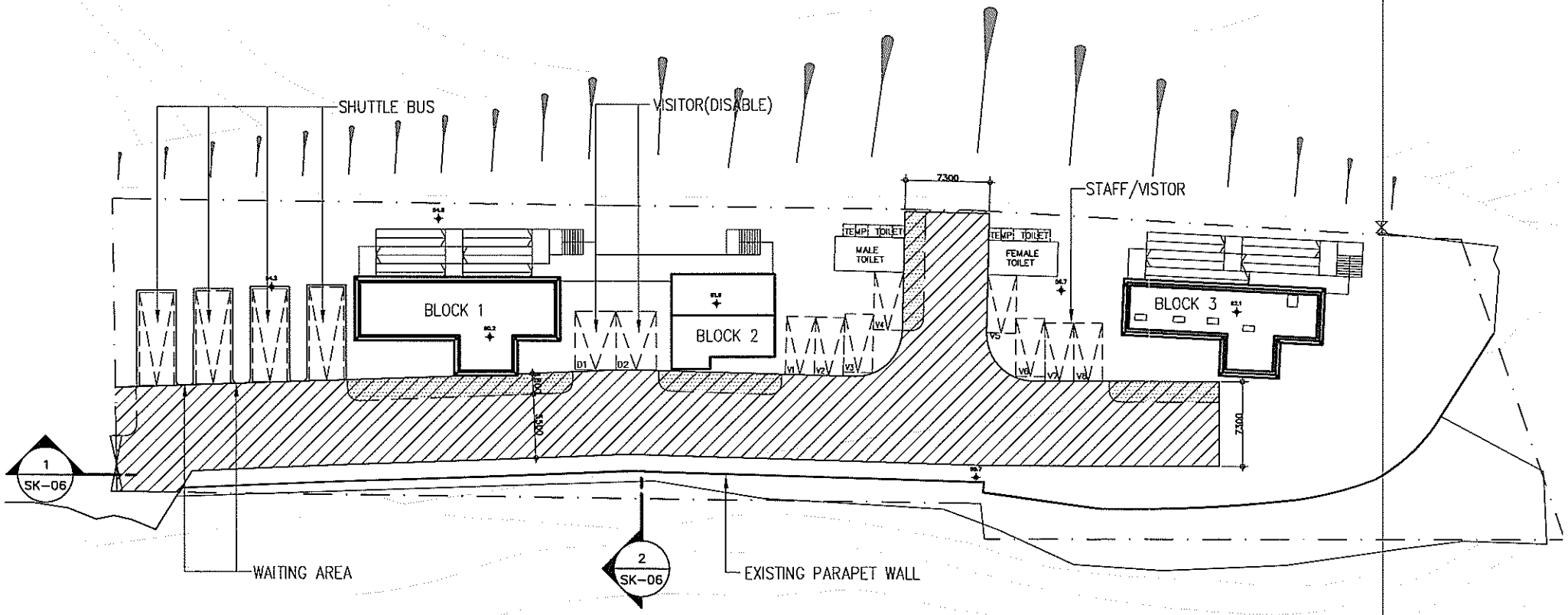
Plan A: Location Map of Tin Kwong Lun Yee

LEGEND

E.V.A

PEDESTRIAN ZONE

SITE BOUNDARY



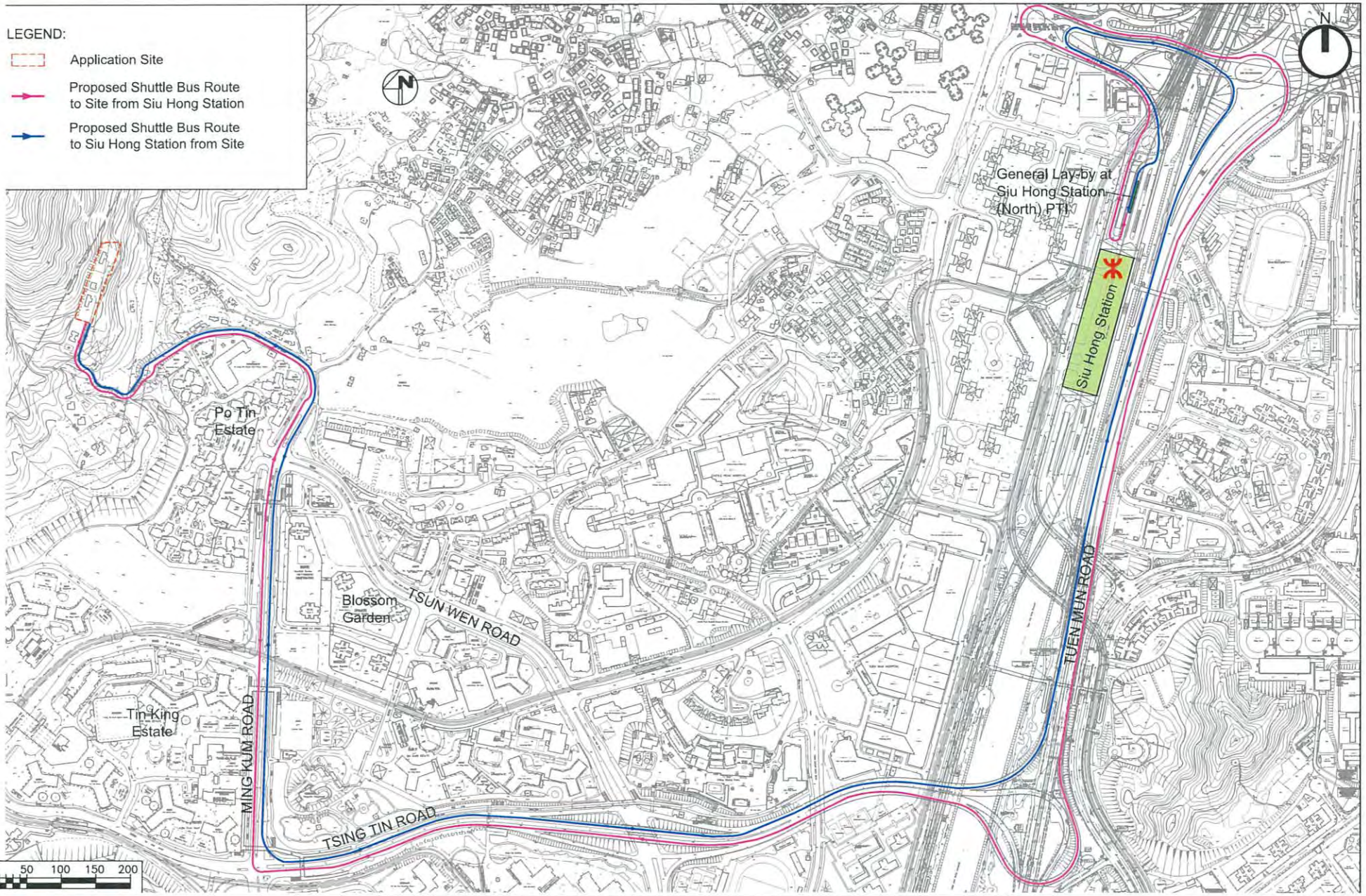
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卓東設計顧問有限公司
A&B DESIGN CONSULTANTS LIMITED
TEL : 2339 2311
Unit 1705-07, 17/F., Prosperity Millennia Plaza, No. 663 King's Road, North Point

Annex D

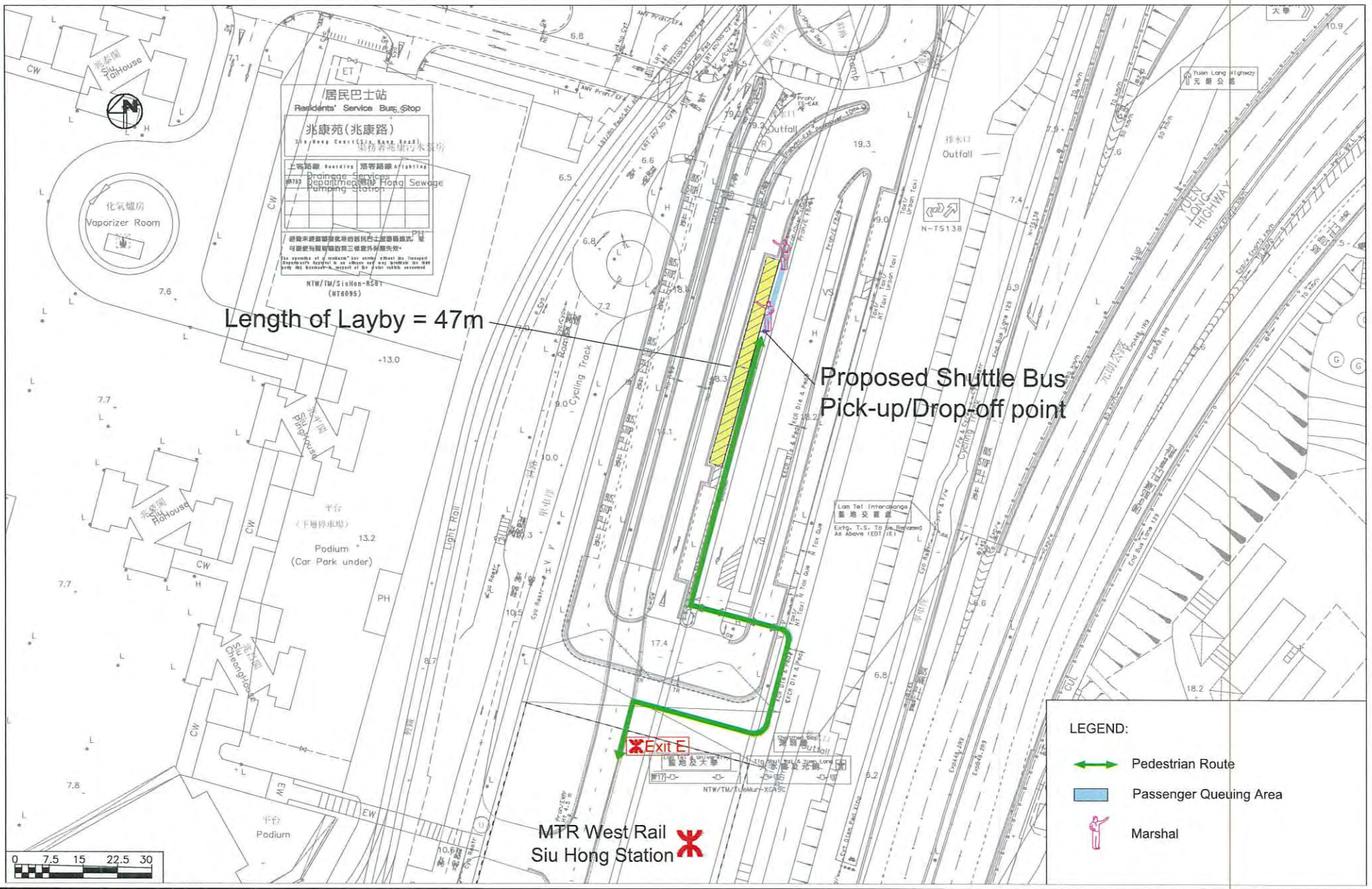
Plan B: Tin Kwong Lun Yee Proposed Master Layout Plan



OZZO TECHNOLOGY

Annex D

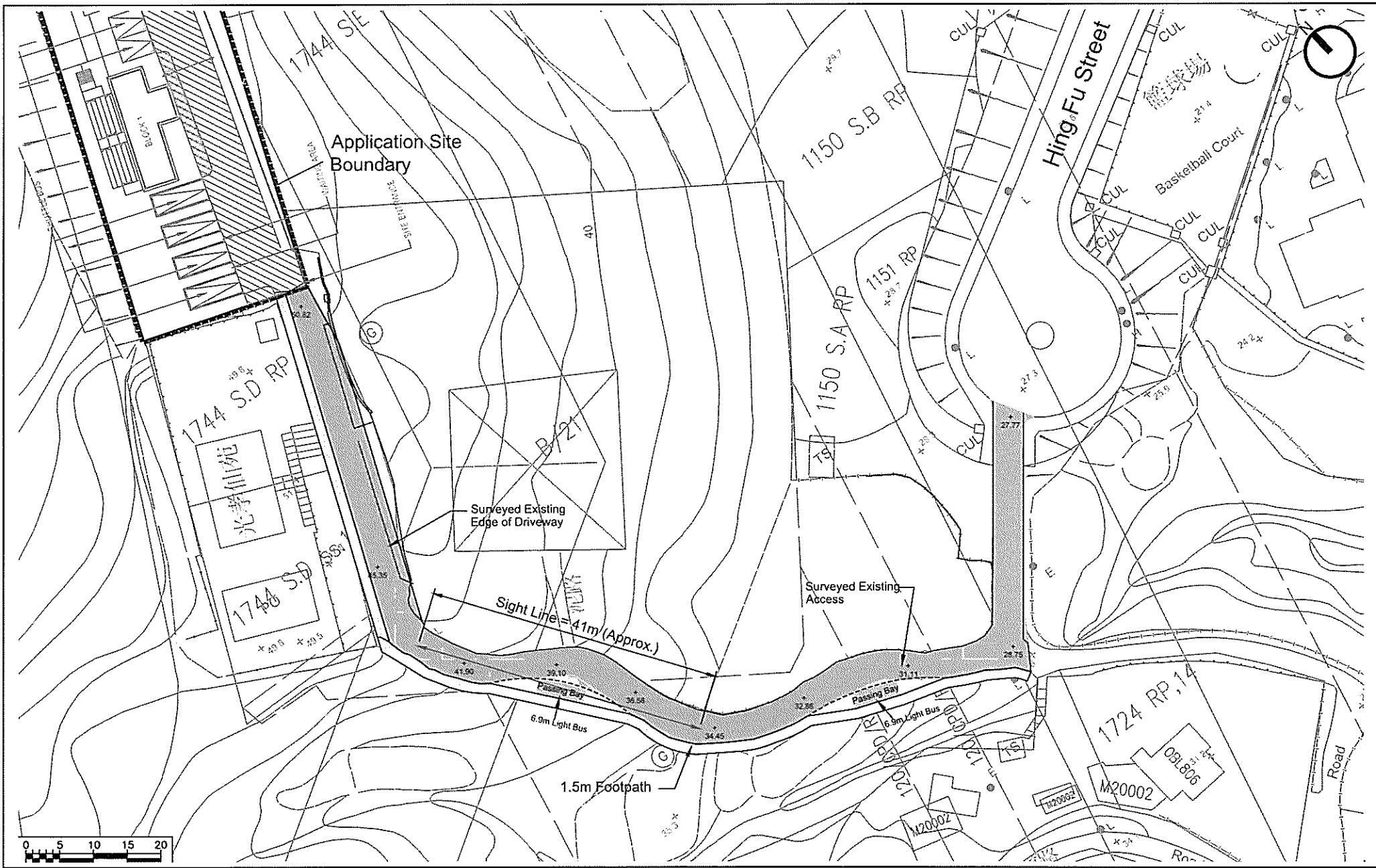
Plan C: Free Shuttle Bus Services From TKLY to MTR West Rail Siu Hong Stn North PTI & Vice Versa



OZZO TECHNOLOGY

Annex D

Plan D: MTR West Rail Siu Hong Station North PTI General Layby



OZZO TECHNOLOGY

Annex D

Plan E: Proposed Road Widening of the Unnamed Concrete Slip Road bet. Tin Kwong Lun Yee Site and the Hing Fu St Cul-de-sac R/A

Annex 'E'

Useful Telephone Contacts of TD & Police

Dept	Name	Rank	Tel	Email Address
TD	Mr. LEUNG Chun-him, Damon	Sr Transp Officer Tuen Mun	23992450	chunhimleung@td.gov.hk
TD	Ms CHULai-yee, Rachel	Transp Officer Tuen Mun	23992449	rachellychu@td.gov.hk
HKPF	Mr. WONG Tung-pan	ADVC OPS TMDIV	36615802	advc-ops-tmdiv@police.gov.hk
HKPF	Ms LO Kit-ying	OSSUC TMPoDIV	36615820	ossuc-tmdiv@police.gov.hk
HKPF	Mr. TSANG Hin-kin	SP E&CDIV T NTN	36613801	sp-e-c-ntn@police.gov.hk
HKPF	Mr. WONG Man-ka	SIP OPS E&CDIV T NTN	36613810	ip-sip-ossu--e-c-ntn@police.gov.hk

Useful Telephone Contacts of FSD

Unit	Email	Telephone	Fax
NT & Kln E Fire Prevention Office	ado_pctf@hkfsd.gov.hk so1_pctf@hkfsd.gov.hk so2_pctf@hkfsd.gov.hk	23025326 23025334 23025335	23029023
Dangerous Goods	fsdgd@hkfsd.gov.hk	24175757 24175768	24130873
Ventilation Unit	fsvent@fsd.gov.hk	27187567	23822495

Useful Telephone Contacts of AMS

Mr. KWONG Tat Shing Raymond	Sr Op(s) & Trg Offr(Ops)	27622041	tskwong@ams.gov.hk
Mr. CHAN Ka-wing, Calvin	Op(s) & Trg Offr (NTW)	27622044	ckwchan@ams.gov.hk

Annex 'F'

Pictures of Tin Kwong Lun Yee, Its Columbarium Halls, Holding Area(s) & Emergency Evacuation Routes

	**Photo 1**: Tin King LRT Stop o/s Po Tin Estate. Visitors access TKLY can walk along the pavement towards western pavement of Ming Kum Road heading for Hing Fu Street via western pavement of Hing Kwai Street for TKLY.
	**Photo 2:** Po Tin Public Transport Interchange (PTI) underneath Po Tin Estate at Ming Kum Road where visitors can take bus to this PTI and then walk along Ming Kum Road, Hing Kwai St heading north for Hing Fu St for TKLY.

	**Photo 3:** Visitors can walk along the pavement of Hing Fu St heading west for Hing Fu St cul-de-sac R/A and the unnamed concrete slip road leading up to TKLY.
	**Photo 4:** Hing Fu St cul-de-sac roundabout where driven vehicles can drop-off visitors at the R/A and let them to walk up the unnamed concrete slip road for TKLY.

	**Photo 5:** The unnamed slip road linking the Hing Fu St cul-de-sac R/A with TKLY.
	**Photo 6:** Tin Kwong Lun Yee Main Entrance by the end of the unnamed concrete slip road.

	**Photo 7:** Tin Kwong Lun Yee Main Entrance Gate. It is wide enough for the access of the 24 seat shuttle bus.
	**Photo 8:** The large open area by the right hand side of columbarium blk 1 i/s TKLY where the future shuttle bus bay will be delineated.

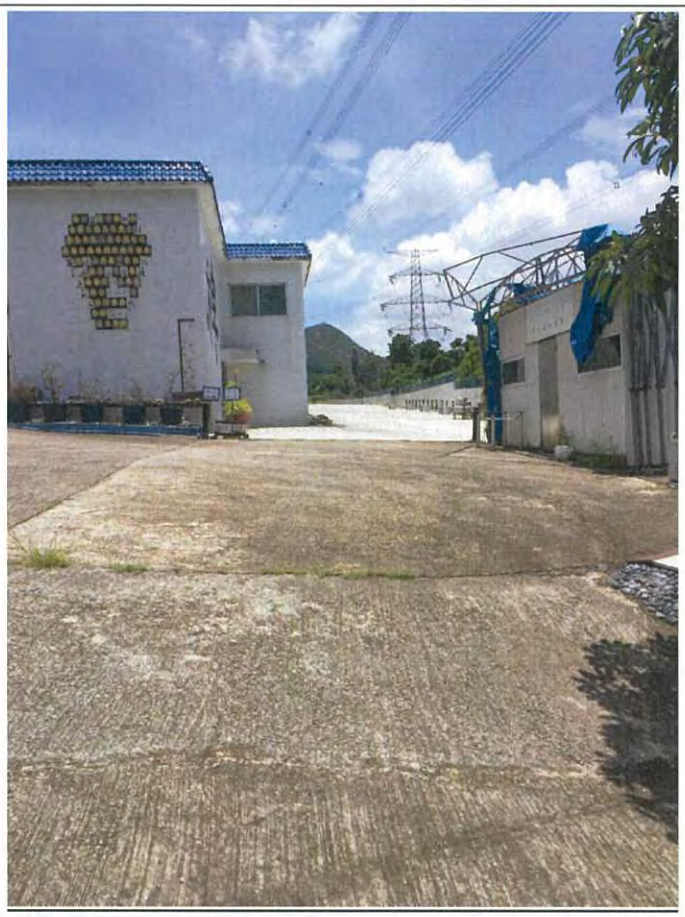
	**Photo 9:** The open area in front of the main entrance of TKLY.
	**Photo 10:** The long and wide compound in front of columbarium Blk 1 to 3 which can accommodate large number of worshippers & holding area can be set up at the compound for periodical release of worshippers into the columbarium Blks for worship.

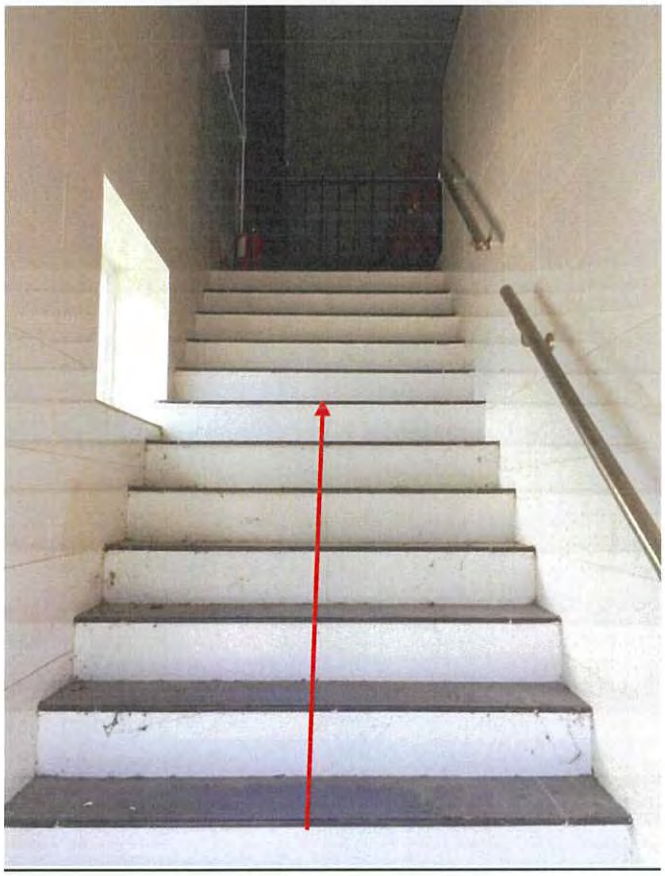
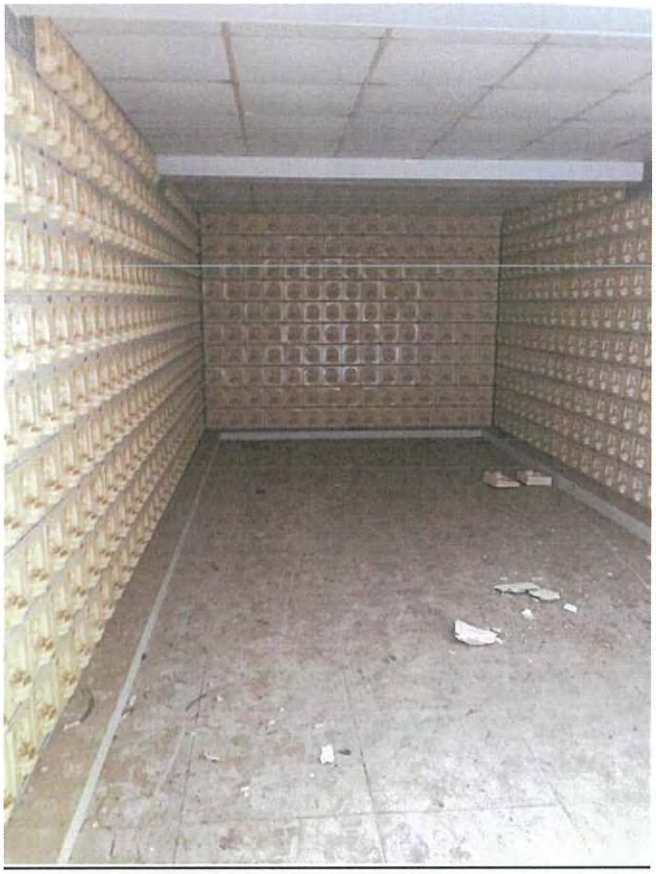
	**Photo 11:** Entrance of the G/F columbarium hall of columbarium blk 1.
	**Photo 12** Staircase leading from the G/F to the 1/F columbarium Hall of one of the Columbarium Blks. Fire extinguisher is mounted at the entrance of the Columbarium Hall.

	**Photo 13:** Exit to the rear of the Columbarium Hall with Exit Sign displayed.
	**Photo 14:** Ramp leading from the 1/F of the Columbarium Blk to the rear alley behind the Columbarium Blks where worshippers can walk along the rear alley towards south heading for the shuttle bus bay for departure. The ramps will be reconstructed as per the designed master

	layout plan made by A & B Architects.
	**Photo 15:** The internal view of one of the Columbarium Halls on the 1/F of one of the Columbarium Blks. The niche spaces will gradually be sold when columbarium licence is approved in due course.
	**Photo 16:** Fire extinguisher is placed at the entrance of the Columbarium Hall.

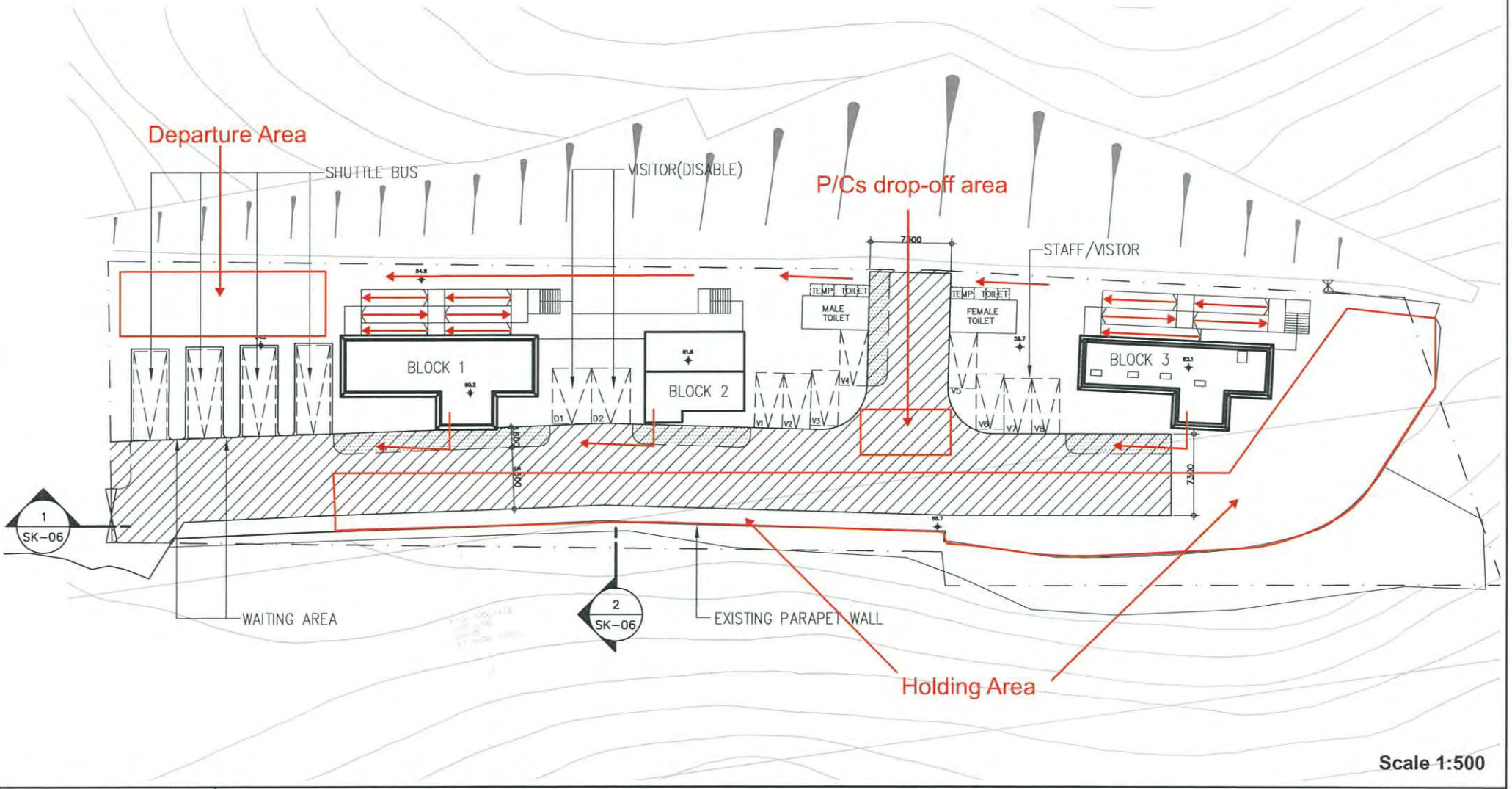
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E.V.A

PEDESTRIAN ZONE

SITE BOUNDARY

Red lines delineated the holding area, P/Cs drop-off area & departure area behind the shuttle bus bay.



Annex F

Plan F: Proposed Holding area, P/Cs Drop-off Area & Departure Area

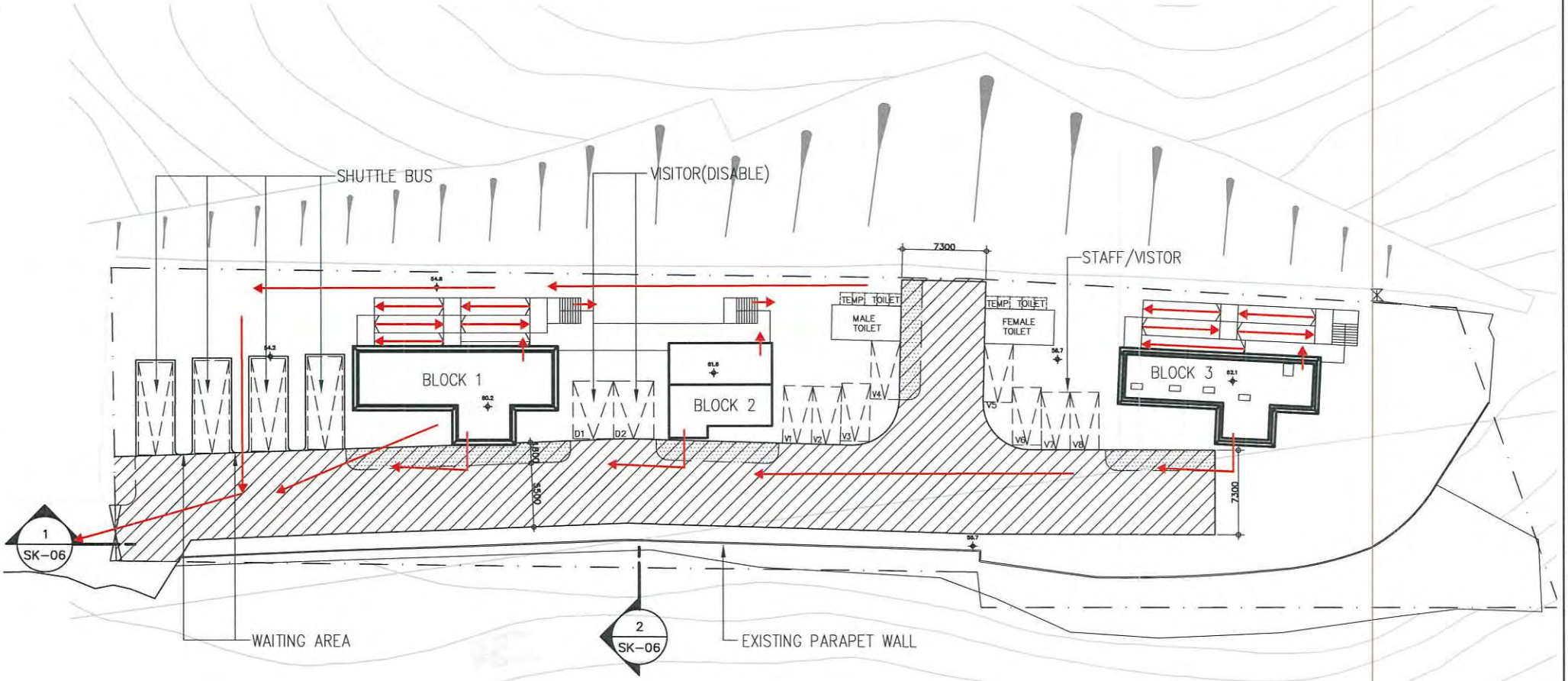
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E.V.A

PEDESTRIAN ZONE

SITE BOUNDARY

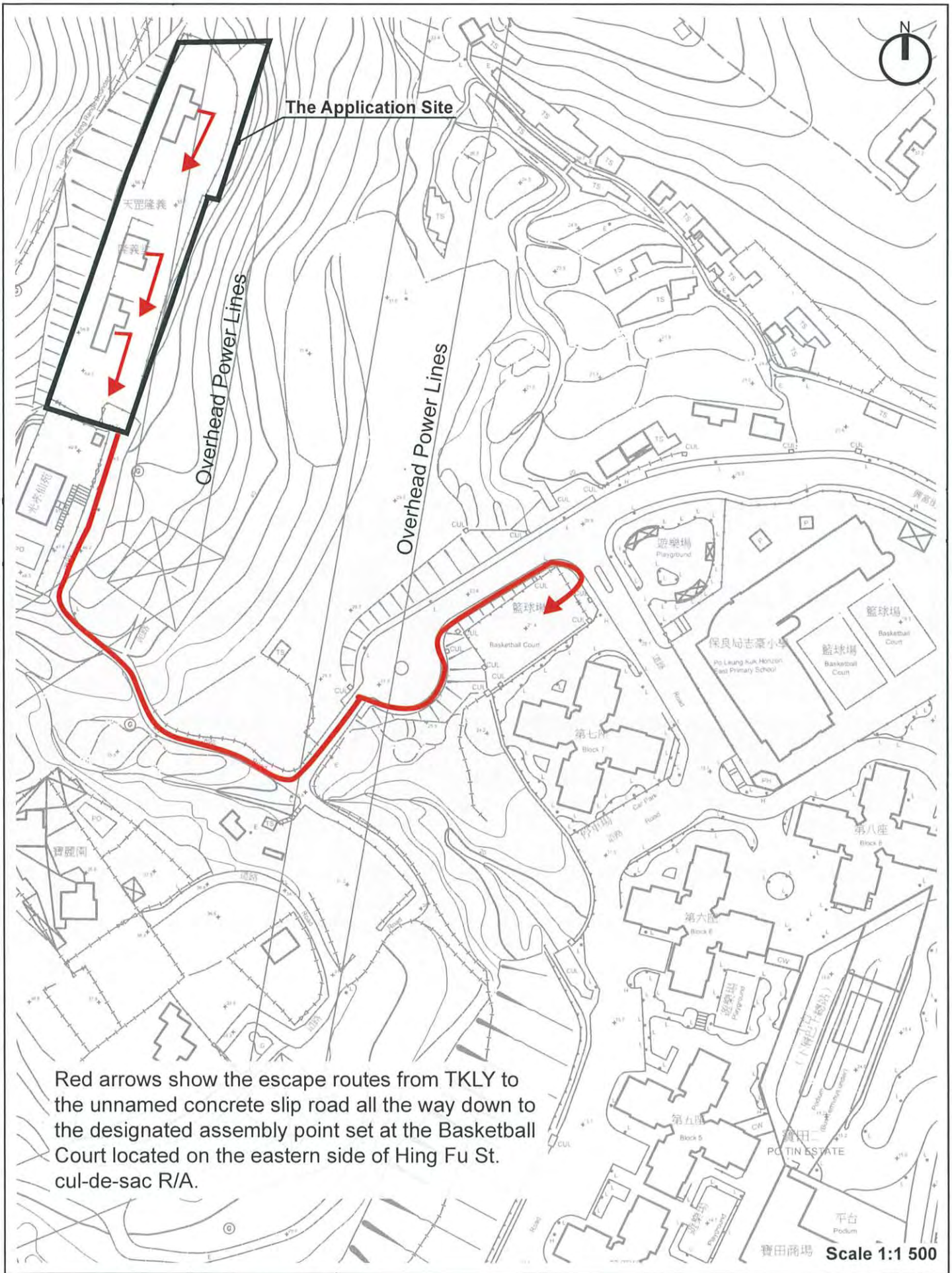
Red arrows show the direction of emergency evacuation routes i/s TKLY to the main entrance of the site.



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Annex F

Plan G: Emergency Evacuation Routes



Annex F	Plan H: Escape Routes from TKLY and the Designated Assembly Point

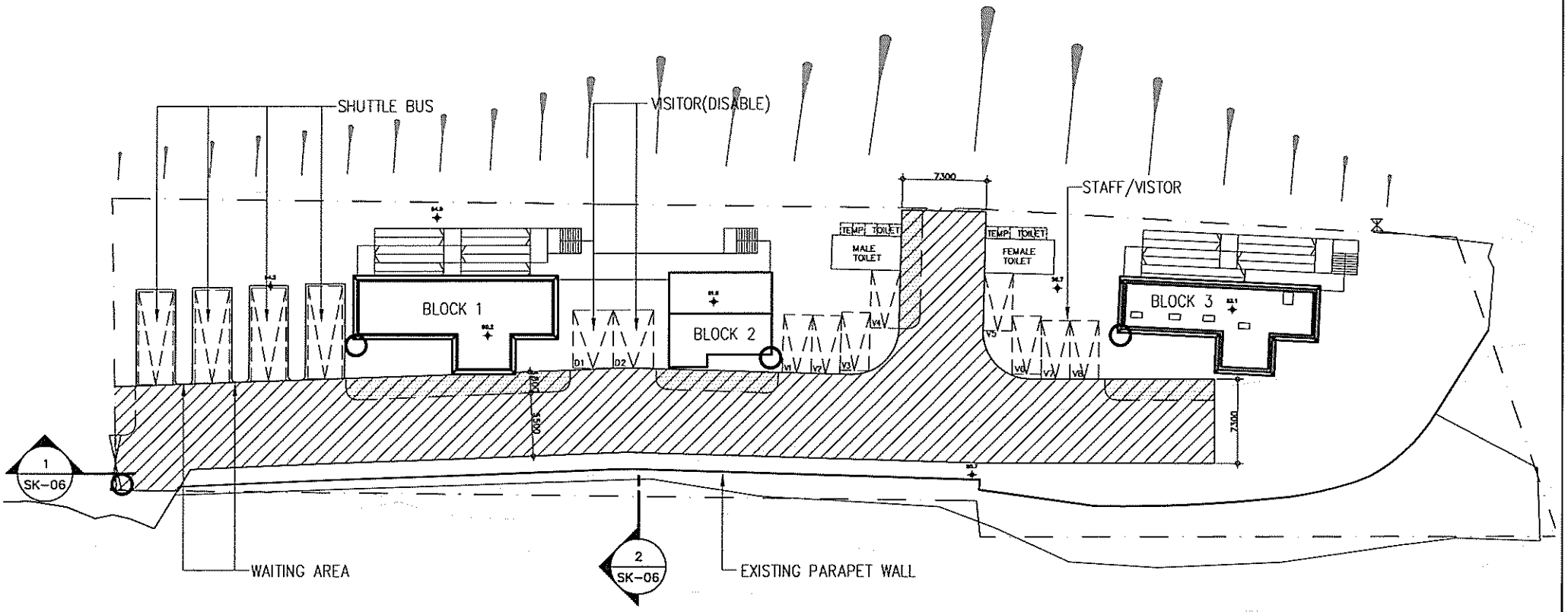
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E.V.A

PEDESTRIAN ZONE

SITE BOUNDARY

AOSC

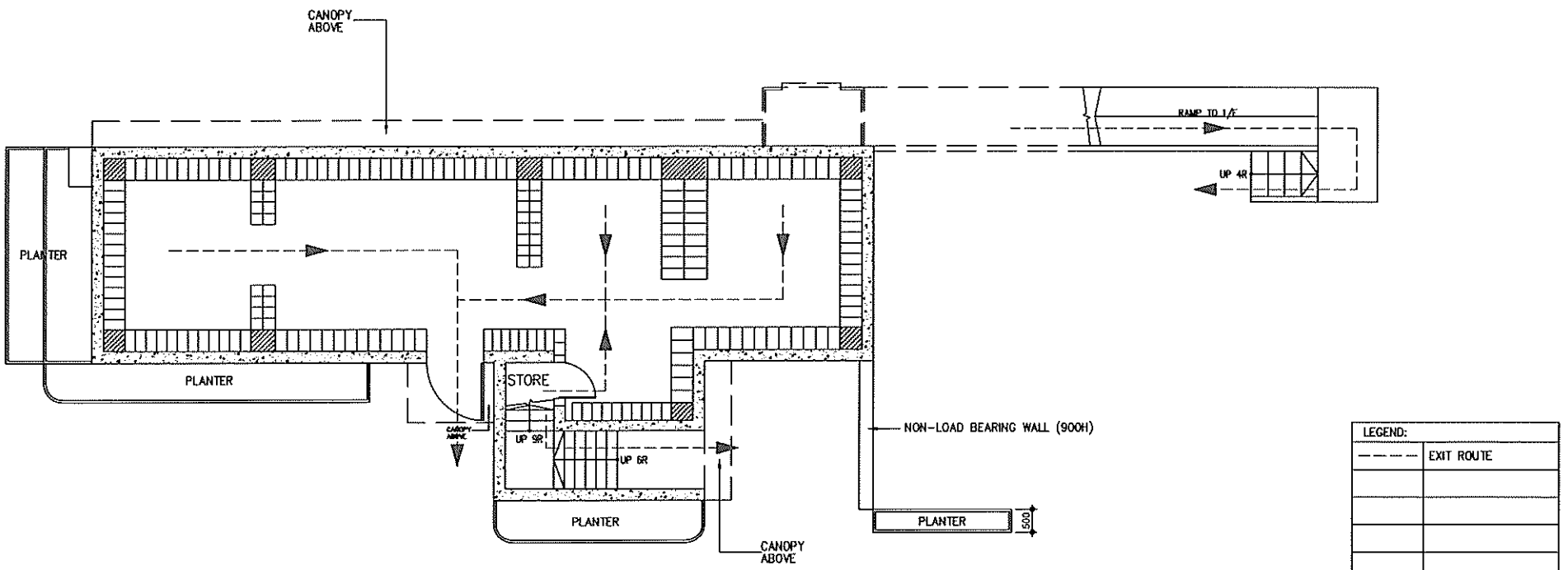


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Annex F

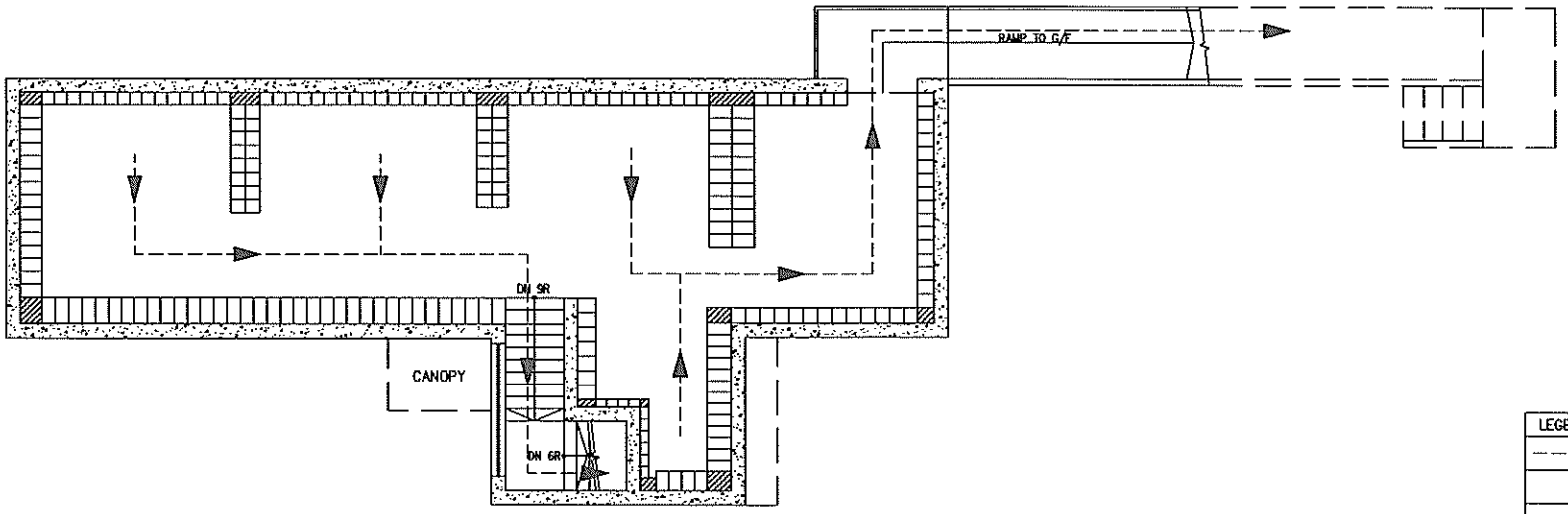
Plan I: Locations of Aerial Overhead Surveillance Cameras (AOSC)

BLOCK 1 G/F EVACUATION PLAN



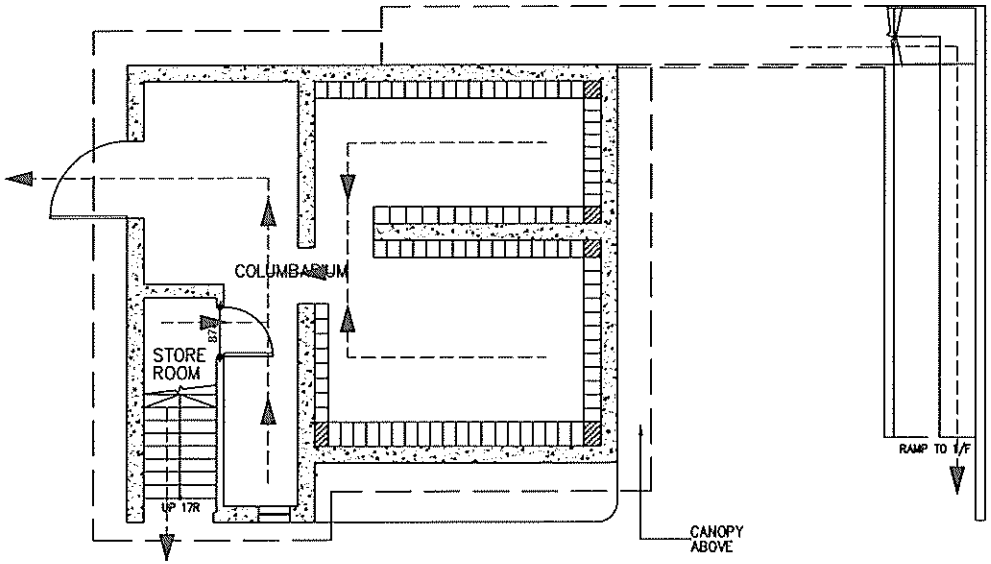
LEGEND:	
- - - - - -	EXIT ROUTE

BLOCK 1 1/F EVACUATION PLAN



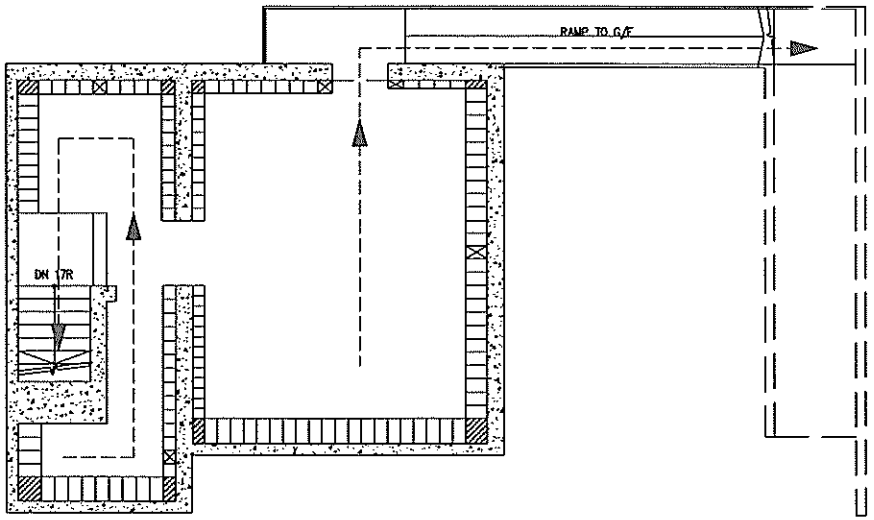
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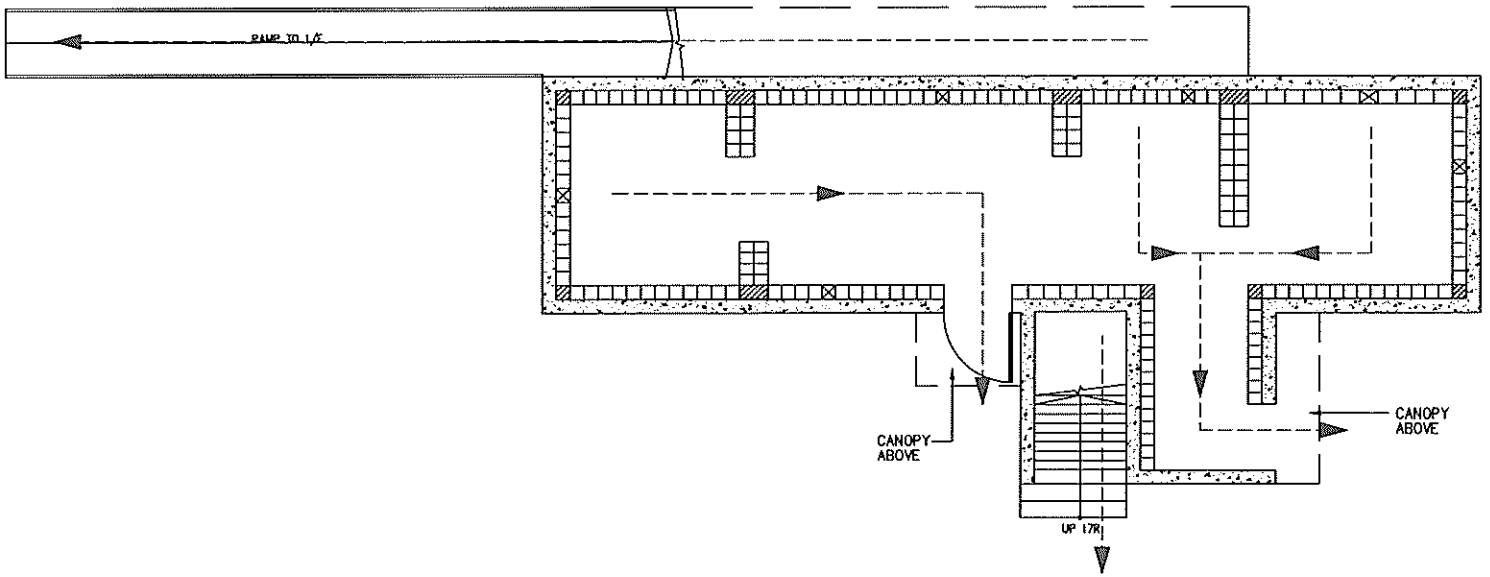
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BLOCK 2 1/F EVACUATION PLAN



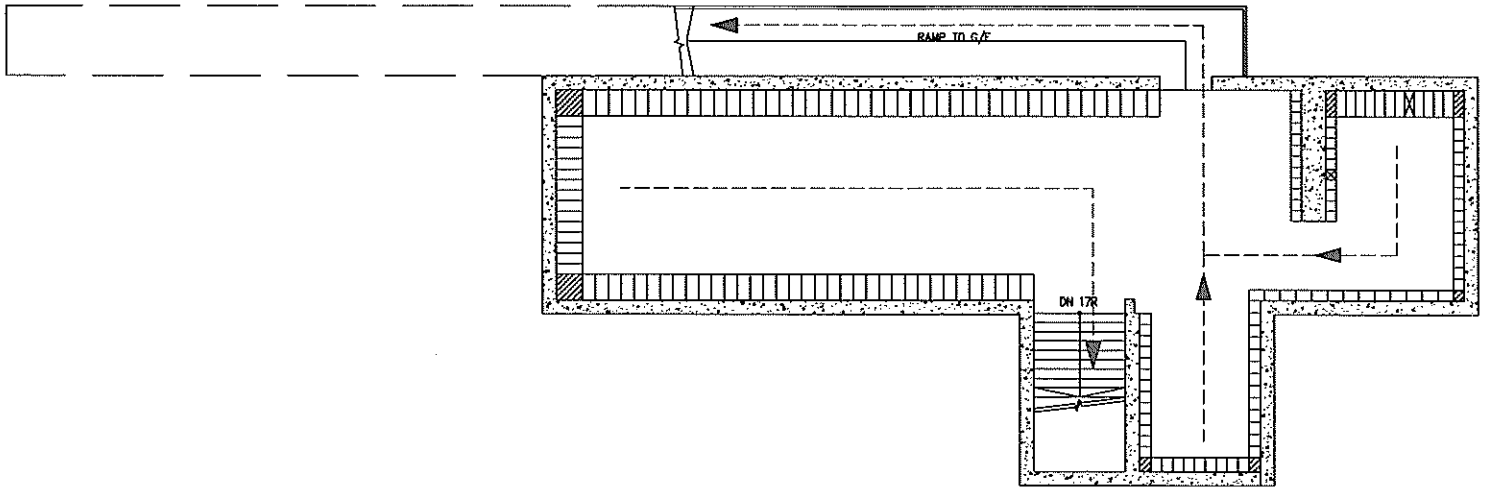
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BLOCK 3 1/F EVACUATION PLAN



LEGEND:	
- - - - -	EXIT ROUTE

TOCO PLANNING CONSULTANTS LTD.
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達材都市規劃顧問有限公司

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

Your Ref.: TPB/Y/TM/23

Dear Sir/ Madam, 16 June, 2021

**Section 12A Rezoning Application from "GB" to "G/IC"
for a Religious Institution and Columbarium in Tin Kwong Lun Yee,
Lot Nos. 1744A-C and 1744G-I in D.D. 132, Tuen Mun**
(Application No.: Y/TM/23)

We refer to your letter dated 6.5.2021.

In response to the requirement of Planning Department, we submit herein 35 copies of the Consolidated Planning Report on Further Information (Consolidated Report) and 18 copies of the Consolidated Report in CD-ROM for the consideration of the Town Planning Board (TPB). This report has incorporated all the previous Further Information(s) in addressing the comments from relevant government departments and the public. TPB members will only have to refer to the Consolidated Report on the process of addressing the planning issues by the Applicant without the need to go through all the previous submissions.

This report contains the following assessments:-

1. Introduction – It shows the purpose of this submission and demonstrates the effort of the Applicant in the submission of several sets of Further Information(s) to address departmental and public concerns in the past years.

2. Development Proposal – During the planning application stage, the Applicant has further improved the development scheme in order to demonstrate that Tin Kwong Lun Yee (TKLY) has spared no efforts to show to all concerned that the columbarium is controllable and will not induce impact to the surrounding area.

3. Detailed Reponses to Departmental Comments – A consolidated table of our responses to departmental comments has been prepared. The Applicant, after carrying out detailed design, planning, technical assessments and detailed public responses in the past years, is confident that, the concerns of the relevant government departments have been adequately addressed.

TED T. C. CHAN
MPIA MHKIP RPP

4. Public Consultation – As of today, a total of 456 public comments were received during several public inspection periods, of which 438 commenters supported the application and only 18 commenters raised concerns to/ objected the application. The Applicant appreciates the strong support from the public and the main concerns of the public have been addressed in detail.

5. Conclusion – It is considered that the present application is well justified based on the following reasons well summarized in the Conclusion of the report:-

   (a) TKLY is a religious institution.
   (b) The proposed development is in line with Government's policy objectives as stated in the Private Columbaria Ordinance.
   (c) The proposed development complies with planning intention of the town plan and compatible with surrounding land use.
   (d) The Site is suitable with no adverse technical problem.
   (e) The proposed development would not an undesirable precedent.
   (f) Public comments have been addressed in detail.

In addition, we have been informed by the Private Columbaria Affairs Office via their letter dated 15.6.2021 that the "Approval-in-principle for Temporary Suspension of Liability Application" for Tin Kwong Lun Yee has been approved by Columbaria Licensing Board. A copy of the subject letter is attached for your information.

We hope that the Consolidated Planning Report on Further Information have fully addressed the comments of the relevant government departments. In light of the public gains of the proposed development and the insignificant potential impacts envisaged, as well as the strong support from the public, the present planning application is recommendable for the approval of the Town Planning Board.

Yours faithfully,
Toco Planning Consultants Ltd.

Ted Chan
Managing Director

c.c. DPO/TM&YLW (Attn. Mr. Kent Lee)
Client

食物環境衞生署
Food and Environmental Hygiene Department

私營骨灰安置所事務辦事處
Private Columbaria Affairs Office

覆函請寄交食物環境衞生署並引用本署檔案編號

本署檔號: (86) in FEHD PC 72-40/62/2018/017 Pt. 3

掛號郵件

香港北角英皇道 651 號
科匯中心 13 樓 5 室
達材都市規劃顧問有限公司
天罡隆義有限公司
(獲授權人士: 葉玉萍女士)

葉女士：

根據《私營骨灰安置所條例》(第630章) (《條例》)
申請指明文書

骨灰安置所名稱:	天罡隆義 [只包括 2017 年 6 月 30 日前已售出的龕位]
骨灰安置所地址:	新界屯門興富街礦山村天罡隆義 (丈量約份第 132 約地段 1744 號 A(部分), B(部分), C(部分), H(部分)及 I(部分))
申請人:	天罡隆義有限公司 (Tin Kwong Lun Yee Limited)
私營骨灰安置所發牌委員會收到申請的日期:	2018 年 2 月 8 日
申請指明文書類別:	就截算前骨灰安置所申請牌照及暫免法律責任書[只包括 2017 年 6 月 30 日前已售出的龕位]

原則上同意暫免法律責任書申請
通知書

現致函通知上述申請人，私營骨灰安置所發牌委員會(發牌委員會)已決定就上述名為「天罡隆義」[只包括2017年6月30日前已售出的龕位]的私營骨灰安置所給予「原則上同意暫免法律責任書申請」，有效期為3年，由發出此通知書的日期開始計算(即有效期由2021年6月15日至2024年6月14日)。

請注意以下事項:

2. 在上述有效期內，申請人須遵守以下的條件:

(i) 就關乎消防安全的規定，申請人須確保該骨灰安置所持續符合由消防處制定及適時更新的“私營骨灰安置所消防安全規定” (請參看「私營骨灰安置所牌照及其他指明文書申請指引」附件9的附錄1)；及

(ii) 就關乎建築物的規定，申請人須確保各座骨灰安置所大樓的一樓鎖上並限制只供管理人員進出，以便進行維修保養；申請人須在通往一樓的通道的顯眼位置，展示一份尺寸不少於420毫米(長)及297毫米(闊)的中英文告示，告示須以耐用物料製成，以不少於72點的字體及數字，述明 “限制只供管理人員進出” ；以及申請人須確保上述告示持久地展示在通往一樓的通道的顯眼位置，並須確保其完整和維持良好狀況。

3. 如果申請人在「原則上同意暫免法律責任書申請」的有效期內不遵守上文第2段所述的條件，發牌委員會可能考慮取消上述「原則上同意暫免法律責任書申請」，並立即就整組申請作定奪，若屆時申請人仍未符合與該暫免法律責任書申請一併提交的牌照申請的所有規定和要求，發牌委員會將可能拒絕整組申請，在該情況下，上述骨灰安置所須結束營運，並按《條例》規定處置骨灰。

4. 在上述3年的有效期內，申請人須根據載於附件為了符合有關的暫免法律責任書申請要求而提交並獲發牌委員會接納的行動計劃連同時間表，合理地迅速採取所有必需步驟，以符合與該暫免法律責任書申請一併提交的牌照申請的要求，並盡快向發牌委員會(由骨灰所辦代收)提交有關的證明文件及資料。

5. 現時發牌委員會並未就上述暫免法律責任書申請作出最終定奪，在上述「原則上同意暫免法律責任書申請」的有效期間，上述骨灰安置所仍處於寬限期。如申請人其後能夠符合關乎骨灰安放數量的規定，發牌委員會仍會考慮發出暫免法律責任書。若在「原則上同意暫免法律責任書申請」的有效期內，申請人已符合上述牌照申請的所有規定和要求，發牌委員會會考慮直接就該牌照申請作出定奪，並舉行公開會議審議該申請。在定奪上述各指明文書申請時，發牌委員會須顧及公眾利益及可顧及任何其他相關因素。

6. 發牌委員會給予「原則上同意暫免法律責任書申請」並不代表上述牌照申請最終一定獲批。現時就「天罡隆義」[只包括2017年6月30日前已售出的龕位]的牌照申請的建議圖則(包括龕位資料)的審核工作仍在進行中，現時未確定此暫免法律責任書申請是否符合有關骨灰安放容量的規定，給予「原則上同意暫免法律責任書申請」並不表示發牌委員會已接納與此暫免法律責任書申請一併提交的牌照申請的建議圖則(包括龕位資料)內的資料。

7. 當上述「原則上同意暫免法律責任書申請」期限接近屆滿時，發牌委員會會考慮應否延續有效期。若申請人未能證明致使發牌委員會信納申請人已合理地迅速採取所有必需步驟，以符合《條例》中有關上述牌照申請的所有規定和要求，發牌委員會將不會延續「原則上同意暫免法律責任書申請」的有效期，而會就上述整組申請作定奪。若申請人在發牌委員會作出定奪時仍未符合有關上述牌照申請的所有規定和要求，發牌委員會將拒絕整組申請。在此情況下，骨灰安置所須結束營運，並按《條例》的相關規定處置骨灰。

8. 若有任何疑問，請致電 2350 7390 或電郵發送致pc_app@fehd.gov.hk與個案經理羅帶璀女士聯絡。

私營骨灰安置所發牌委員會秘書林綺萍

2021年6月15日

重要提示

骨灰安置所營辦者有責任確保骨灰安置所符合所有適用於其骨灰安置所的法例和政府規定，並且遵守所有相關當局(包括但不限於建築事務監督、地政總署署長、規劃署署長、消防處處長、警務處處長、運輸署署長、環境保護署署長、機電工程署署長或其他決策局、政府部門以及有關的主管當局)按其執行的法例或職權所訂立的一切要求及條件，以及須就違反的事項承擔各類刑罰及法律責任。

Section 12A Rezoning Application from "GB" to "G/IC" for a Religious Institution and Columbarium in Tin Kwong Lun Yee, Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744H & 1744I in D.D. 132, Tuen Mun

Consolidated Planning Report on Further Information



CONSULTANT TEAM

Toco Planning Consultants Ltd.

A&B Architects Ltd.

Blanc Design Studio

OZZO Technology (HK) Ltd.

SMEC Asia Ltd.

Henry Chan and Partners Consultant Engineering Ltd.

TOCO

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1. INTRODUCTION

1.1 Purpose of Submission

Tin Kwong Lun Yee Ltd. (TKLY/ the Applicant) is a religious institution dedicated for Lang Yan Sing Gau, which is a branch of Tibetan Buddhism Vajrayana. It was established at the upper part of Kwong Shan Tsuen (the application site) since 2009 (see **Plan A**). In response to the latest requirements of Private Columbaria Ordinance (PCO) in 2017, the Applicant had submitted both applications for Columbarium Licence and Temporary Suspension of Liability (TSOL) for Pre-cut-off Columbarium in TKLY to the Private Columbaria Licensing Board (PCLB) on 8.2.2018. During the 3 years of validity period of TSOL, the Applicant has to comply with all statutory and government requirements, including town planning, land lease and building safety.

(a) Section 12A (s.12A) Rezoning Application

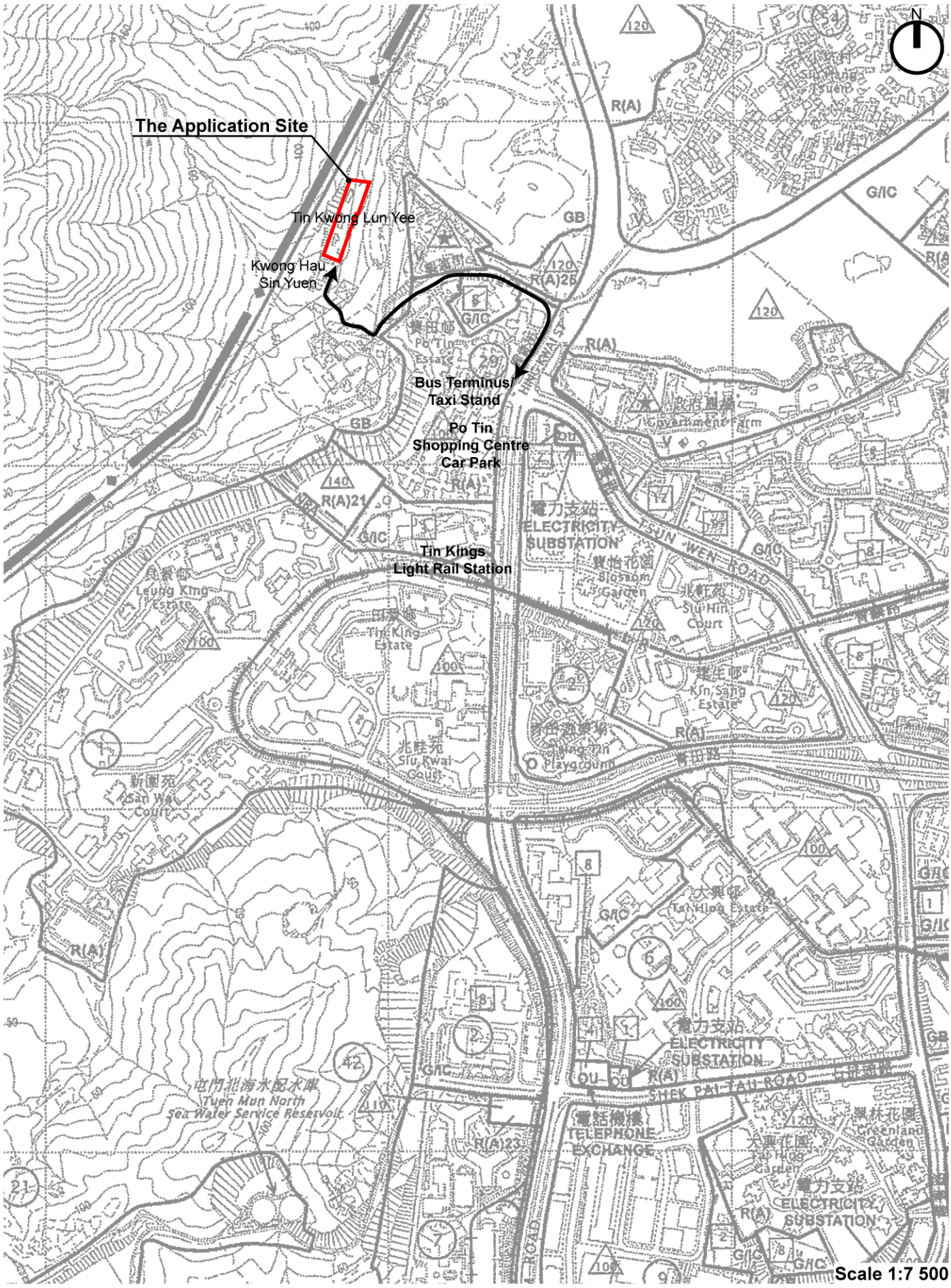
In order to fulfil the town planning requirement of PCO, a section 12A (s.12A) rezoning application to amend the zoning of the site covering various private lots in D.D. 132 on the Approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35 from "Green Belt" ("GB") to "Government, Institution or Community" ("G/IC") was submitted to the Town Planning Board (TPB/ the Board) on 28.6.2019 (Application No. Y/TM/23). A Planning Statement with detailed planning and technical assessments on the background of religious and columbarium use; Government's intention and land use compatibility issue; technical concerns; and precedent case in the area had also been submitted to support the case. The proposed zoning will permit the subsequent submission of a section 16 (s.16) planning application for regularising the religious institution and columbarium in TKLY.

(b) Further Information I – Further Information II (F.I. (I) – F.I. (II))

After the submission of this s.16 planning application, comments from the public and relevant government departments had been received by the Board. The Applicant had submitted **F.I. (I) – F.I. (II)**, which included the Applicant's detailed responses, a revised Traffic Impact Assessment (TIA), an updated Management Plan, a revised Environmental Assessment (EA), a revised Sewerage Impact Assessment (SIA) and a Geotechnical Planning Review Report (GPRR), to the TPB on 4.12.2019 and 24.7.2020 respectively in order to address departmental and the public concerns. No further comments from Urban Design Unit of Planning Department (PlanD), Architectural Services Department, Electrical and Mechanical Services Department and Buildings Department have been received afterwards.

(c) Further Information III – Further Information IV (F.I. (III) – F.I. (IV))

In order to relieve the concern of Transport Department (TD), the Applicant has decided to close the application site during Ching Ming and Chung Yeung Festival Days and the two Saturdays and two Sundays before and after the festival days.



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Plan A: Zoning and Location Plan

Extract of Approved Tuen Mun Outline Zoning Plan No. S/TM/35

Such arrangement has been incorporated in the TIA, which forms part of the **F.I. (III)** and **F.I. (IV)**, and submitted to the Board on 24.12.2020 and 11.2.2021 respectively. Moreover, the aforesaid Further Information (F.I.) had included an updated Management Plan, a revised EA, a revised SIA and a revised GPRR to address the departmental comments. No further comments from Landscape Unit of PlanD, District Lands Office/Tuen Mun, Environmental Protection Department and Hong Kong Police Force have been received afterwards.

(d) <u>Further Information V – Further Information VI (F.I. (V) – F.I. (VI))</u>

The Applicant had received comments from District Planning Office/Tuen Mun in relation to the presence of the religious symbols and religious facilities at the application site. Besides, the Geotechnical Engineering Office (GEO) noted the Applicant's road improvement proposal and they requested the Applicant to submit additional assessment in order to make sure the proposal is geotechnically feasible. The Applicant had submitted a **F.I. (V)**, which includes a detailed clarification letter on the religious use of TKLY and an updated GPRR (part), to the TPB on 31.3.2021.

Further comments from TD and GEO on the **F.I. (V)** were received on 9.4.2021 and 23.4.2021 respectively. The Applicant has submitted a **F.I. (VI)** with responses to TD's comments and the replacement pages of GPRR to the TPB on 30.4.2021. No further comments from TD and GEO have been received afterwards.

(e) <u>Consolidated Planning Report on Further Information</u>

As recommended by PlanD, the Applicant has prepared a **Consolidated Planning Report on Further Information** (CPR) to complement this application for consideration of the Board. This report is a standalone document consolidating all the previous works from F.I. submitted since 4.12.2019, without referring to the comments previously made by the relevant government departments. It comprises all the technical assessments for this planning application, as well as the detailed responses to public comments.

This CPR supersedes all the previous F.I. submitted to the Board. It has demonstrated that all the public and departmental concerns have been fully addressed and resolved. This report contains the following sections:-

- Section 1: Introduction;
- Section 2: Development Proposal;
- Section 3: Detailed Reponses to Departmental Comments;
- Section 4: Public Consultation; and
- Section 5: Conclusion

The updated architectural drawings, clarification letters and consolidated technical assessments are attached in **Appendices I** to **XIII**.

1.2 Background of the Application

A Planning Statement with technical assessments was submitted with the s.12 rezoning application on 28.6.2019. During the statutory publication period, the Applicant has submitted a number of Further Information(s) to support the development proposal. Master schedule of the captioned application is summarized as follows:-

Table 1.1: Submission and Responses Schedule of the Application

Date	Items	Remarks
28/06/2019	Submission of s.12A rezoning application.	Planning Statement Architectural Drawings Traffic Impact Assessment Management Plan Environmental Assessment Sewerage Impact Assessment
16/08/2019	24 public comments on Planning Statement received.	Support: 23 No Comment: 0 Raised Concerns: 0 Opposing: 1
19/08/2019 21/08/2019 23/08/2019 03/10/2019	Departmental comments on Planning Statement received.	Urban Design Unit, Planning Department Architectural Services Department Electrical and Mechanical Services Department Buildings Department Transport Department Landscape Unit, Planning Department District Lands Office/Tuen Mun Environmental Protection Department Geotechnical Engineering Office
03/09/2019	Planning application deferred.	1st Time
04/12/2019	Submission of Further Information (I) *(Accepted but Not Exempted from Publication)*	<u>Further Information (I)</u> Responses to Departmental Comments Responses to Public Comments Revised Architectural Drawings Detailed Clarification Letters Revised Traffic Impact Assessment Updated Management Plan Revised Environmental Assessment Revised Sewerage Impact Assessment Geotechnical Planning Review Report
08/01/2020	Departmental comments on Further Information (I) received.	Transport Department Geotechnical Engineering Office Landscape Unit, Planning Department

Date	Items	Remarks
10/01/2020 14/01/2020		Environmental Protection Department District Lands Office/Tuen Mun
10/01/2020	17 public comments on Further Information (I) received.	Support: 12 No Comment: 0 Raised Concerns: 2 Opposing: 3
15/01/2020	Planning application deferred.	2nd Time
24/07/2020	Submission of Further Information (II) *(Accepted but Not Exempted from Publication)*	<u>Further Information (II)</u> Responses to Departmental Comments Responses to Public Comments Detailed Clarification Letter Supporting Traffic Documents Revised Management Plan Revised Environmental Assessment Revised Sewerage Impact Assessment Revised Geotechnical Planning Review Report
21/08/2020 24/09/2020	Departmental comments on Further Information (II) received.	District Lands Office/Tuen Mun Landscape Unit, Planning Department Geotechnical Engineering Office Transport Department Environmental Protection Department Hong Kong Police Force
04/09/2020	55 public comments on Further Information (II) received.	Support: 53 No Comment: 0 Raised Concerns: 1 Opposing: 1
16/09/2020	Planning application deferred.	3rd Time
24/12/2020	Submission of Further Information (III) *(Accepted but Not Exempted from Publication)*	<u>Further Information (III)</u> Responses to Departmental Comments Responses to Public Comments Detailed Clarification Letter Revised Traffic Impact Assessment Revised Environmental Assessment Revised Sewerage Impact Assessment Revised Geotechnical Planning Review Report
25/01/2021 27/01/2021	Departmental comments on Further Information (III) received.	Environmental Protection Department Landscape Unit, Planning Department Geotechnical Engineering Office Hong Kong Police Force District Lands Office/Tuen Mun Transport Department

Date	Items	Remarks
05/02/2021	80 public comments on Further Information (III) received.	Support: 78 No Comment: 0 Raised Concerns: 1 Opposing: 1
11/02/2021	Submission of Further Information (IV) *(Accepted but Not Exempted from Publication)*	<u>Further Information (IV)</u> Responses to Departmental Comments Detailed Clarification Letters Revised Traffic Impact Assessment Updated Management Plan Revised Environmental Assessment Revised Sewerage Impact Assessment Revised Geotechnical Planning Review Report
19/03/2021	151 public comments on Further Information (IV) received.	Support: 151 No Comment: 0 Raised Concerns: 0 Object/Concern: 0
23/03/2021 25/03/2021	Departmental comments on Further Information (IV) received.	Geotechnical Engineering Office District Planning Office/Tuen Mun
31/03/2020	Submission of Further Information (V) *(Accepted but Not Exempted from Publication)*	<u>Further Information (V)</u> Responses to Departmental Comments Detailed Clarification Letters Revised Geotechnical Planning Review Report
30/04/2021	129 public comments on Further Information (V) received.	Support: 121 No Comment: 0 Raised Concerns: 3 Object/Concern: 5
09/04/2021 23/04/2021	Departmental comments on Further Information (V) received.	Transport Department Geotechnical Engineering Office
30/04/2021	Submission of Further Information (VI) *(Accepted and Exempted from Publication)*	<u>Further Information (VI)</u> Responses to Departmental Comments Revised Geotechnical Planning Review Report
10/06/2021	Additional Request	**Consolidation Planning Report on Further Information**
25/06/2021	**Tentative Date of TPB Meeting**	

2. DEVELOPMENT PROPOSAL

2.1 S.12A Rezoning Application Submitted on 28.6.2019

This s.12A rezoning application for TKLY was submitted to the Board on 28.6.2019. In order to be in line with the information pack submitted to the PCLB, the present application is intended only to rectify the 11,094 columbarium niches in TKLY as recorded on the enactment date of PCO, i.e. 30.6.2017. It does not involve any alterations and additions to the existing building and no additional building has been proposed at the site. Small footbridges have been proposed at first level to link up Block 1, Block 2 and Block 3. Development schedule of the proposed scheme and the latest niche information submitted to PCLB and is shown in **Table 2.1**.

2.2 Improvement to the Development Proposal

After the submission of this planning application, a series of improvement measures have been proposed by the Applicant and they are summarized as follows:-

- **Religious Proposal**
  In future, TKLY aims at providing religious lecture/ training once every Saturday and Sunday. The "Tao Tong" (道堂) enlisted were and would be joining the activity or training in due course. Each lecture will not have more than 20 students. Religious lecture and training activities will be carried out at the proposed open lawn and multi function plaza and Block 3 would be used as a back-up area. All the religious activities will be suspended during the grave sweeping periods.

  A clarification letter in relation to the presence of the religious symbols and religious facilities at the application site has been submitted to the Board on 31.3.2021 (see **Appendix VIII**)

- **Traffic Improvement Measures**
  The visitor car parking spaces are increased to a total of 12 nos. (including 2 accessible car parking spaces). The Master Layout Plan, Landscape Master Plan and Planting Plan have been revised as attached in **Appendix I**. In addition, the proposed road improvement is reviewed to provide one more lay-by at the unnamed road which is shown in the Consolidated TIA report in **Appendix IX**.

  In order to relieve the concern of TD, the Applicant has decided to close the site during Ching Ming and Chung Yeung Festival Days and the two Saturdays and two Sundays before and after the festival days. The Management Plan has been further strengthened to handle to visitors during the grave sweeping occasions.

The Applicant would like to emphasise that, over the past few years, they have spared no efforts to show all concerned that the situation as a result of the columbarium is controllable and will not impose adverse impact to the surrounding area than at present. Thus, the religious and columbarium use in TKLY is not an undesirable use.

Table 2.1: Development Schedule of the Proposed Development

	Application Site
Site Area (m^2)	About 3,137m^2
Plot Ratio	0.155 (approximate)
Proposed GFA (m^2)	About 489.16m^2
Site Coverage	7.816% (approximate)
No. of Block(s)	3
Maximum Building Height	2 storeys (about 6.2m)
No. of niche(s)	11,094 niches
No. of car parking spaces(s)	12 spaces for visitors (including 2 disabled parking)
No. of Lay-by(s)	4 bays for shuttle bus

Building	Building Height	Level	Facilities	G.F.A.
Block 1	6.2m	G/F	• Columbarium	84.010m^2
			• Staircase + store room	8.811m^2
		1/F	• Columbarium	86.500m^2
			• Staircase	6.321m^2
Block 2	5.65m	G/F	• Columbarium	40.678m^2
			• Management office	5.470m^2
			• Toilet for disabled and staff	6.721m^2
			• Staircase, circulation space + store room	13.064m^2
		1/F	• Columbarium	61.470m^2
			• Staircase	4.463m^2
Block 3	6.2m	G/F	• Columbarium and Religious use	80.011m^2
			• Staircase	5.815m^2
		1/F	• Columbarium and Religious use	79.556m^2
			• Staircase	6.270m^2
			Total	**489.160m^2**

Classification		Block 1	Block 2	Block 3	Total
No. of Sold & Occupied Niches	**Single-Urn Niche**	8	0	0	8
	Double-Urn Niche	0	0	0	0
	Family Niche For 4 Members	0	0	0	0
No. of Sold but Not Yet Occupied Niches	**Single-Urn Niche**	928	0	0	928
	Double-Urn Niche	0	0	0	0
	Family Niche For 4 Members	0	0	0	0
No. of Niches Available for Sale	**Single-Urn Niche**	3,413	0	0	3,413
	Double-Urn Niche	0	2,688	3,914	6,602
	Family Niche For 4 Members	0	57	86	143
Total		4,349	2,745	4,000	11,094

3. DETAILED RESPONSES TO DEPARTMENTAL COMMENTS

A s.12A rezoning application with detailed planning and technical assessments for TKLY was submitted to the TPB on 28.6.2019. During the departmental circulation stage of the present rezoning application, the Applicant had received a number of comments from the following government departments:-

- Urban Design Unit, Planning Department (UD)
- Architectural Services Department (ASD)
- Electrical and Mechanical Services Department (EMSD)
- Buildings Department (BD)
- Transport Department (TD)
- Landscape Unit, Planning Department (L)
- District Lands Office/Tuen Mun (DLO)
- Environmental Protection Department (EPD)
- Geotechnical Engineering Office (GEO)
- Hong Kong Police Force (HKPF)

The Applicant had submitted F.I (I) to F.I (VI) in responses to the departmental comments received after the planning submission. As recommended by PlanD, the Applicant has prepared a Consolidated Planning Report on Further Information to consolidate all the previous works from F.I. submitted since 4.12.2019, without referring to the comments previously made by the relevant government departments. A consolidated table of responses to departmental comments (RtoC Table) is shown in **Table 3.1** to **Table 3.10** in the following page.

3.1 Responses to Comments from Urban Design Unit, Planning Department

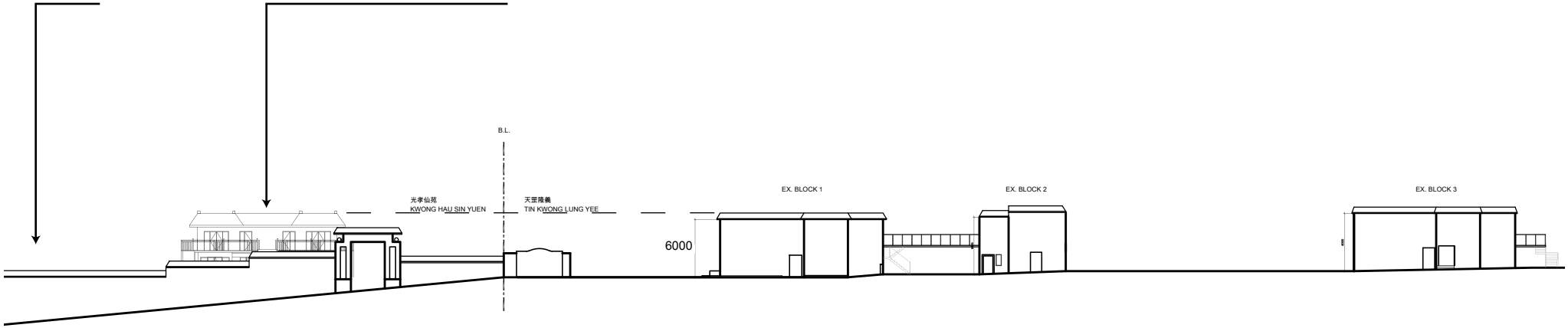
Date	Items	The Applicant's Responses
Comments on the Planning Statement received on 19.8.2019		
UD&L (UD)1	2. According to the submitted information, the applicant proposes to rezone the application site (Tin Kwong Lun Yee) from "GB" to "G/IC" of the Tuen Mun OZP No. S/TM/35 with a site area of 3,137m^2 and building height of 2 storeys to regularize the existing religious institution and columbarium niches at the application site.	Noted.
UD&L (UD)2	3. The application site involves three 2-storeys buildings with building heights of about 7m. The buildings comprise columbarium, management office, store room and temporary toilet etc. The existing temporary structures at the application site would be demolished and replaced by internal vehicular access, car parks, loading/ unloading bays and landscape area. According to the applicant, no additional buildings have been proposed within the application site. As such, adverse visual impacts would not be anticipated.	Noted.
UD&L (UD)3	4. The Master Layout Plan (Plan F) and Landscape Master Plan (Plan N) have shown some 'pedestrian zones' within internal access. The applicant should pay attention to ensure traffic safety of visitors.	Noted. The Management Plan will include traffic safety measures for visitors.
UD&L (UD)4	5. Comments from landscape aspects will be provided separately.	Noted.

3.2 Responses to Comments from Architectural Services Department

Date	Items	The Applicant's Responses
Comments on the Planning Statement received on 19.8.2019		
ASD (1)	2. Based on the information provided, we have the following comments from architectural and visual impact point of view for your consideration: a) In order for us to comment on the visual impact, the Applicant is advised to submit the building height information and photos for adjacent Kwong Hau Sin Yuen.	Noted. Please find attached the elevation plan (SK-02) showing the building height and photo for Kwong Hau Sin Yuen adjacent the application site for your attention.
ASD (2)	b) Natural cross ventilation is highly recommended. The Applicant is advised to provide openings/ louvre for columbarium walls to achieve natural cross ventilation.	The Applicant is prepared to renovate the buildings without installing any air conditioning system. Hence, the newly designed openings will allow cross ventilation in the buildings. A diagram (SK-04) showing the preliminary design idea is attached for your attention.
ASD (3)	c) For Male and Female Toilets, openable window with natural lighting and ventilation complying B(P)R Section 36 shall be provided. WCs and urinals shall be indicated on plan for toilets and provision of WCs and urinals shall comply with relevant B(P)R or Code of Practice.	Noted. The Applicant will comply with the relevant regulations and a part plan (SK-03) of Male and Female Toilets with the calculation of WCs and urinals is attached for your attention.







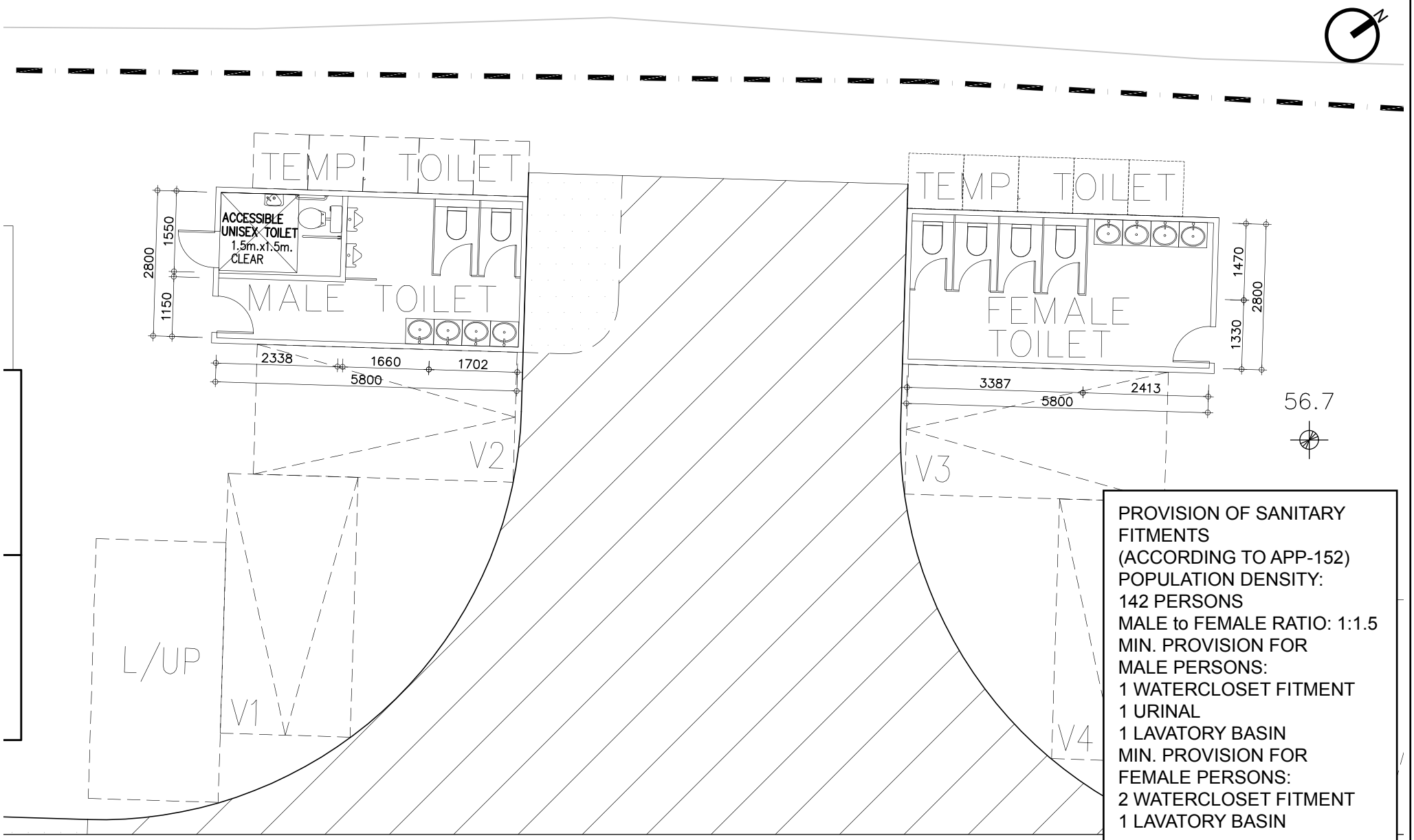
Kwong Hau Sin Yuen

Tin Kwong Lun Yee

Scale 1:600

卓東設計顧問有限公司
A&B DESIGN CONSULTANTS LIMITED
TEL : 2339 2111
Unit 1706-07, 17/F., Prosperity Millennia Plaza, No. 663 King's Road, North Point

SK-02: Elevation Drawing

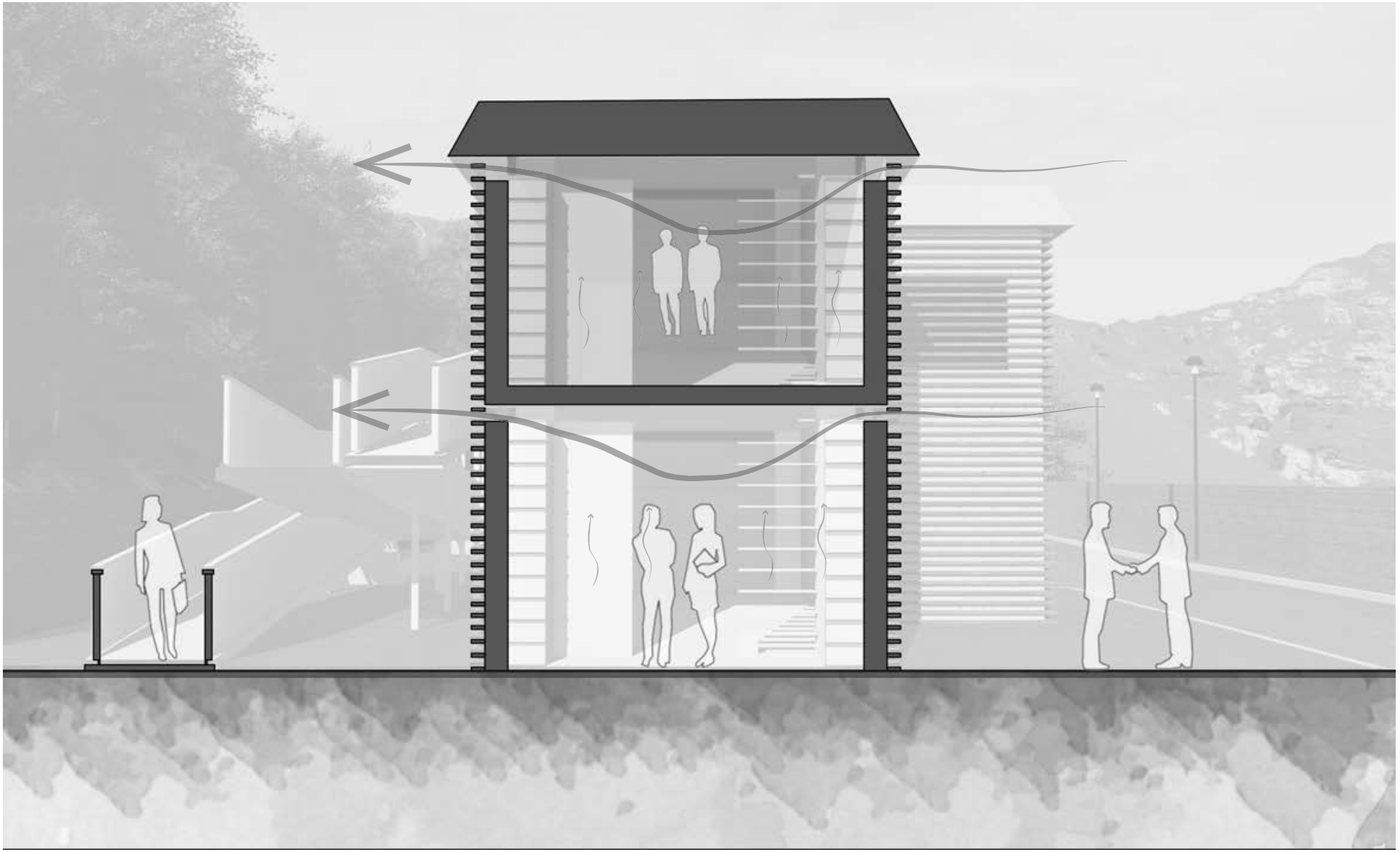


PROVISION OF SANITARY FITMENTS
(ACCORDING TO APP-152)
POPULATION DENSITY:
142 PERSONS
MALE to FEMALE RATIO: 1:1.5
MIN. PROVISION FOR
MALE PERSONS:
1 WATERCLOSET FITMENT
1 URINAL
1 LAVATORY BASIN
MIN. PROVISION FOR
FEMALE PERSONS:
2 WATERCLOSET FITMENT
1 LAVATORY BASIN

Scale 1:100

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SK-03: Toilet Layout Plan for Tin Kwong Lun Yee



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SK-04: Preliminary Design of Cross Ventilation in the Buildings

3.3 Responses to Comments from Electrical and Mechanical Services Department

Date	Items	The Applicant's Responses
Comments on the Planning Statement received on 19.8.2019		
EMSD (1)	**Electricity Safety** Based on the information provided, there are 400kV extra high voltage overhead lines running above the application site, which is within the preferred working corridor of the concerned overhead lines as stipulated in the Hong Kong Planning Standards and Guidelines (HKPSG) published by the PlanD. As far as electrical safety is concerned, we do not support the captioned application. However, should you Department wish to proceed with the approval of the captioned application, the following conditions shall be incorporated for strict compliance by the applicant and his contractors:-	Please be advised that the three 2-storey buildings under Small House Occupation Permits had been erected at the application site since 1960s. They had been converted into religious and columbarium uses in 2009. The present application is intended to regularize the Pre-cut-off Columbarium within the existing premises without proposing any new building at the site. A 6m emergency vehicular access will be provided at the site. The existing premises at the application site are relative far away from the pylon in the area (about 50m). As the proposed scheme is for regularisation of the religious institution and columbarium and it is not intended for domestic use, people who visit the proposed development will not stay at the application site for a long period of time. Therefore, the electrical safety risk to people who visit will be minimal. Moreover, it is noticed that the EMSD had no objection in principle to the previous application (No. Y/TM/8) subject to the following conditions which being restrictedly complied with by the Applicant: (a) Due to the nature of the proposed development, some furnaces may need to be operated during the normal operation of the proposed columbarium. The furnaces may emit air-borne particles and pollutants which may interferer with the operation of the high voltage overhead lines and pylon nearby and would affect the reliability of electricity supply. As such prior consultation with the electricity supplier on the design and location of the furnaces is necessary. (b) A minimum vertical clearance of 7.6m between the top of any structure and the lowest point of the overhead lines (OHL) conductors must be maintained; and a

Date	Items	The Applicant's Responses
		minimum safety clearance of 5.5m from the OHL conductors in all directions shall also be maintained. (c) The roof of the developments shall not be accessible. (d) No scaffolding, crane and hoist shall be built or operated within 9m from the conductors of the OHL at all time. CLP Power should be consulted on the safety precautions required for carrying out any works in the vicinity of the OHL. (e) In any time during and after construction, CLP Power shall be allowed to get access to the 50m working corridor area of the concerned OHL for carrying out any operation, maintenance and repair work including tree trimming. (f) The Electricity Supply Lines (Protection) Regulation and the "Code of Practice on Working near Electricity Supply Lines" established under the Regulation shall be observed by the Applicant and his contractors at all times. The Applicant and his contractors are committed to **strictly follow** the above recommendations as imposed by EMSD.
EMSD (2)	(a) Please refer to the requirements of minimum safety clearance, minimum vertical clearance and preferred working corridor of the concerned overhead lines as stipulated in Clause 2.3.5, 2.3.6 and 2.3.14 under Chapter 7 - Utility Services of the HKPSG published by the Planning Department and ensure they shall be maintained at any time during and after construction;	Noted. Please refer to our response to Item EMSD(1) above.

Date	Items	The Applicant's Responses
EMSD (3)	(b) No scaffolding, crane and hoist shall be built or operated within 6m from the outermost 400kV conductors at all times. Warning notices should be posted at conspicuous locations to remind operators and workers of the site boundary. CLP Power shall be consulted on the safety precautions required for carrying out any works near the concerned overhead lines;	Noted. The Applicant will follow the requirements and consultant CLP Power on the safety precautions required for carrying out any works near the concerned overhead lines during implementation stage.
EMSD (4)	(c) In any time during and after construction, CLP Power shall be allowed to get access to the working corridor area of the concerned overhead lines for carrying out any operation, maintenance and repair work including tree trimming;	Noted and agreed.
EMSD (5)	(d) The Electricity Supply Lines (Protection) Regulation of the "Code of Practice on Working near Electricity Supply Lines" established under the Regulation shall be observed by the applicant and his contractors when carrying out works in the vicinity of the electricity supply lines.	Noted and agreed.
EMSD (6)	(e) As regards the electric and magnetic files arising from the transmission overhead lines, the applicant should warned of possible undue interference to some electronic equipment in the vicinity, if any.	Noted.
EMSD (7)	(f) To our understanding, some furnaces may need to be operated during the normal operation of the proposed columbarium. These furnaces may emit air-borne particles and pollutants which may interfere with the operation of the concerned overhead lines and pylons nearby and would affect the reliability of electricity supply. As such, prior consultation with CLP Power on the design and location of the furnaces is necessary.	Noted. No furnaces are proposed within the application site. Prior consultation with CLP Power on the design and location of the furnaces will be conducted if the Applicant proposed to provide furnaces in the application site in the future.

3.4 Responses to Comments from Buildings Department

Date	Items	The Applicant's Responses
Comments on the Planning Statement received on 19.8.2019		
BD(1)	2. I have the following comments under the Buildings Ordinance (BO) to the proposed rezoning. (i) The site shall be provided with means of obtaining access thereto from a street and emergency vehicular access in accordance with Regulations 5 and 41D of the Building (Planning) Regulations [B(P)R] respectively.	Noted.
BD(2)	(ii) If the site does not abut on a specified street having a width of not less than 4.5m, the development intensity shall be determined under B(P)R 19(3) during plan submission stage. I reserve my comment on the proposed maximum plot ratio and site coverage at this stage.	Noted.
BD(3)	(iii) If the proposed plot ratio is based on the assumption that Gross Floor Area exemption will be granted for green/ amenity features and non-mandatory/ non-essential plant rooms etc., the pre-requisites in Practice note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers APP-151 and APP-152 should be complied with.	Noted.
BD(4)	(iv) Disregarding private carparking spaces from GFA calculation under the BO will be considered on the basis of the criteria set out in PNAP APP-2 during building plan submission stage.	Noted.
BD(5)	(v) Noting the proposed development is a columbarium, the premises should comply with specified design and construction requirement for columbarium facilities as outlined in PNAP APP-154.	Noted.

Date	Items	The Applicant's Responses
BD(6)	(vi) If there are existing structures which had been erected on leased land without approval of the Buildings Department (not being a New Territories Exempted House), they are unauthorized under the BO and should not be designated for any approved use under the captioned application unless such are permissible under the Private Columbaria Ordinance (Cap. 630).	Noted.
BD(7)	(vii) The proposed building may be subject to the issue of various licences and should comply with the building and safety requirements as may be imposed by the relevant licensing authorities.	Noted.
BD(8)	(vii) Please be advised that our detail comments on the proposed scheme would only be given during plan submission stage.	Noted.

3.5 Responses to Comments from Transport Department

<table>
<tr><th>Date</th><th>Items</th><th>The Applicant's Responses</th></tr>
<tr><td colspan="3">Comments on the Planning Statement received on 19.8.2019</td></tr>
<tr><td>TD
(A1)</td><td>2. The Applicant claimed that there were sold niches, inferred niches and unsold niches within the subject columbarium as at 30 June 2017, as summarized in Table 4.3 of the Planning Statement. It is noted that the Applicant's submission has also been circulated to Food and Environmental Hygiene Department (FEHD) for confirmation on whether the operator's claim about the number and types of the niches were true and correct. In the absence of FEHD's confirmation, we have assessed the application based on the number and types of the niches in the information pack provided to TD in November 2017 (the Information Pack). Out findings are:

<table>
<tr><th></th><th>No. of Sold Niche</th><th>No. of Interred Niche</th><th>No. of Unsold Niche</th></tr>
<tr><td>This application</td><td>928</td><td>8</td><td>10,158</td></tr>
<tr><td>Information Pack</td><td>942</td><td>46</td><td>10,218</td></tr>
</table>
</td><td>Noted. The TIA Study is based on the latest information as indicated in Table 4.3 of the Planning Statement, i.e. a total of 11,094 niches in the subject columbarium.</td></tr>
<tr><td>TD
(A2)</td><td><u>3. For niches sold before 30 June 2017</u>
(I) As the number of niches in this application are slightly lower than the figures in the Information Pack and in accordance with the policy initiative announce by the Government 22 November 2017, we have no in-principle objection to the planning application.</td><td>Noted.</td></tr>
<tr><td>TD
(A3)</td><td>(II) Regarding the Management Plan proposal in Appendix VI of the Planning Statement, please note our comments from traffic engineering viewpoint below:

i) This Appendix should be reviewed and updated according to our comments on the TIA mentioned in paragraph 4 below.</td><td>Noted.

The Management Plan has been updated based on the Consolidated TIA Report (Appendix X refers). Amendments are made as follows :-</td></tr>
</table>

Date	Items	The Applicant's Responses
		• Para. 4 bullet pt. 5 where the 10 parking spaces are increased to 12. • Para. 6.5 (iii) to (iv) where the sub-paragraphs are amended according to the calculation made by the traffic consultant in this RtoC. • Para. 4.5.1 - 4.5.4 and Table 4-2 concerning manpower deployment highlighted in the revised TIA to run in line with the provision of manpower mentioned in the Management Plan.
TD (A4)	ii) Although the applicant proposed "visit-by-appointment" arrangement to control the number of visitors and they would encourage their visitors to use shuttle bus services provided by the applicant during the grave sweeping periods, we had reservation on the effectiveness of these administrative measures. The applicant should seek the comments from FEHD and the Police on the practicality and enforceability of these administrative measures. Relevant contingency plans should also be prepared in case the visitors do not follow the administrative measures.	Please be advised that the Management Plan for TKLY had also been submitted to the PCLB on 2.7.2019 and it was accepted by the Police on 16.8.2019 (**Appendix VI** refers). In Section 5 of the Management Plan it is indicated in details that all future niche purchasers need to adhere to the clauses and house rules specified in the future sale agreements according to the following specifications, namely :- (1) The niche purchasers will be obliged to comply with the house rule that no worship activities will be conducted Ching Ming and Chung Yeung Festival Days and the two Saturdays and Sundays before and after the festival days; (2) All niche purchasers need to comply with the "Visit-By-Appointment" system through E-booking to be introduced for the worship during the festive periods by TKLY; (3) They will be allocated by TKLY with a specific period of time for the worship in order that an orderly worship is conducted within a pre-arranged time slot so that only a controllable number of worshippers are arranged to access TKLY for worship without creating any chaotic situation and the holding capacity within TKLY is not exceeded; (4) All future niche purchasers will sign sale

Date	Items	The Applicant's Responses
		agreements to agree that they and their accompanying visitors will resort to the use of free shuttle bus services to be provided by TKLY to access and depart from TKLY and advance booking via E-booking will be arranged with them by TKLY as no parking facilities will be provided by TKLY to them except for disabled and elderly with advance booking through E-booking; (5) They also have to adhere to the house rules set up by TKLY; (6) During the signing of the sale agreements, the niche buyers will be given a notice in Chinese & English with the agreed clauses and house rules clearly appended on them so that they are properly notified about all the rules that they need to adhere to for accessing TKLY for worship; (7) All niche purchasers will be notified clearly during the signing of the sale agreements that TKLY has the right to deny access for the visitors into TKLY during the festive periods if the niche purchasers and their accompanying visitors fail to adhere to clauses and house rules concerned as specified in the sale agreements. If they disagree with the said clauses, the sale agreement will be revoked; (8) The above-mentioned series of tight measures are mandatory for the niche purchasers and their accompanying visitors to comply with coupled with other stringent administrative measures to be introduced by TKLY for the festive periods, the worshipping activities thereat will surely be run in a safe, well organized & effective form, hence a smooth & orderly worship fashion will be provided by TKLY without creating any chaotic crowd situation and/or severe traffic disruption to the nearby area of the premises; (9) The advantage of the "Visit-By-Appointment" system is to ensure

Date	Items	The Applicant's Responses
		that an acceptable and controllable proportion of visitors visit TKLY only day-by-day during the festive periods so that the maximum holding capacity of TKLY will not be overflown and more importantly to comply with the guidelines issued by the Licensing Board. Hence, the reservation raised by TD is just somewhat superfluous and the chance of having the visitors not following the administrative measures is absolutely remote. At the time of purchase, the niche purchasers will be informed of special traffic arrangements and will be confirmed by legal advisers to accept the house rules, which are backed by the niche sale contract and are legally enforceable. Those who express doubts or difficulties to accept the traffic arrangement will be advised not to, and indeed, are unlikely to make purchase. Moreover, the Applicant is well aware that failure to fulfill the planning approval conditions and lease conditions can result in the revocation of the planning approval, re-entry of the site and even termination of Columbarium License. As such, they will also have a deferring effect to ensure that the Applicant will make full effort to implement the proposed traffic arrangement and to enforce the house rules.
TD (A5)	iii) In the TCMP, the Applicant should provide emergency plan in case there are exceeding private vehicles driven to the Site for their visit and there are insufficient visitor car parking spaces in the Site. The propose measures should consider the traffic condition of the connected village road and Hing Fu Street.	Please refer to our updated responses to TD(B2) below for the provision of contingency plan.
TD (A6)	iv) Referring to Section 6.8, the journey time for a circular trip of the shuttle bus is underestimated as the waiting time at signalized junctions have been ignored. The passenger carrying capacity of each shuttle bus per day is overestimated. Please review.	Please refer to our updated responses to TD(B3) below with the calculation of travelling time based on the worst case scenario.

Date	Items	The Applicant's Responses
TD (A7)	v) Referring to Section 8.1(v), all the direction signs should comply with the Government standard and be submitted to this Office for approval before installation.	Noted. The Management Plan with the updated Plan B showing the position of directional signs was submitted to the PCLB on 2.7.2019 and the Police have accepted the proposed Management Plan via letter from PCLB dated 16.8.2019 (see **Appendix VI**).
TD (A8)	vi) Referring to Section 10.2, a layout plan indicating the arrangement of tidal flow system and directional signs inside the Site should be provided for presentation.	Noted. An updated Plan B with the position of directional signs is attached in the Management Plan (see **Appendix X**).
TD (A9)	vii) Referring to Section 11, please provide details of surveillance and broadcasting measures and arrangements and first aid services for crowd management.	Detailed information will be incorporated in the Management Plan and submitted to the PCLB upon approval of the planning application.
TD (A10)	viii) Referring to Section 18.3 of TIA report, the following information should be provided in the TCMP for reference: a. Organization chart for future TKLY working personnel; b. The top management personnel (e.g. general manager, chief executive officer, etc.), including their names, positions, contact telephone numbers, years of service, experience, duties and professional qualifications (if any); c. The years of service, experience, duties and professional qualifications of other managerial personnel (if any).	As the information involves personal data which are confidential and sensitive in nature, upon approval of the planning application the Applicant will provide the required information in the latest Management Plan and submit to PCLB.
TD (A11)	ix) Referring to Section 19, please provide details of drills and staff training for emergency situations and the periodic review of the contingency plan.	Detailed information will be incorporated in the Management Plan and submitted to the PCLB upon approval of the planning application. Fire drills will be conducted in every 6 months and staff training for emergency will be done periodically. The emergency evacuation plan and contingency plan will be reviewed annually.

Date	Items	The Applicant's Responses
TD (A12)	x) Referring to Section 22, the financial plan should be enclosed on the TCMP instead of separate envelope.	The financial plan involves confidential and sensitive information which should not be disclosed to the public. In addition, according to the PCLB's previous version of the "Application Guide for Private Columbarium Licence and other Specified Instruments", it states that… *"to submit the Financial Plan in a separate envelope which is marked "Annex to Management Plan Item (11)"*.
TD (A13)	4. For niches unsold as at before 30 June 2017 (I) Please note our comments on the TIA in Appendix V of the Planning Statement below. 1) Referring to section 3.1.2, please provide justification why only 2 visitor car parking spaces are provided in the Application Site that seems to be insufficient. The Applicant should explore the feasibility to provide more visitor car parking spaces in the Site or appropriate measures to manage the demand during peak grave sweeping period. Also, please provide details for loading/ unloading area on a layout for visitors.	Noted. Noted. The visitor car parking spaces are increased to a total of 12 nos. (including 2 accessible car parking spaces) and the layout shown in Figure 3-1 of the Consolidated TIA Report. It should be noted that the visitor car parking spaces will be closed during Festival Periods as shuttle bus services will be provided for visitors. The arrangement for the pick-up/drop-off area is shown in Figure 3-1 in the Consolidated TIA Report (see **Appendix IX**).
TD (A14)	2) The Applicant should provide the traffic data in Ching Ming Festival and compare with the traffic data during Chung Yeung Festival to adopt the set of data being more conservative in the model.	The 2019 Ching Ming Observed Peak Hour Traffic Flows are shown in Figure 2-5 of the Consolidated TIA Report. It is identified that the peak hour traffic flows in the study area were higher during the 2019 Ching Ming Festival than 2018 Chung Yeung Festival, hence, the traffic analysis in the Consolidated TIA Report are undertaken based on 2019 Ching Ming peak hour traffic flows (see **Appendix IX**).
TD (A15)	3) The survey results of key junctions tabulated in table 6-4 seem to be too optimistic. Please provide junction calculations based on the survey counts results of traffic flow at all the key junctions carried out for reference.	Table 6-4 of the earlier version of TIA Report (dated June 2019) shows the junction performance for the forecast 2028 peak hour flows on Chung Yeung. Junction calculations based on 2018 Chung Yeung surveyed traffic flows are shown in Table 2-3 and detailed calculations are already included in Appendix A of the earlier version of TIA Report.

Date	Items	The Applicant's Responses
		The junction calculations based on 2019 Observed Ching Ming peak hour flows are given in Appendix A of the Consolidated TIA Report (see **Appendix IX**).
TD (A16)	4) Referring to Section 6.2.2, this TIA Study should make reference to the latest 2016-based Territorial Population and Employment Data Matrices (TPEDM) planning data instead of 2014-based TPEDM. Please review the results.	The 2014-based TPEDM is the latest version of planning data published by PlanD and available to the public.
TD (A17)	5) Referring to Section 6.2.2, please elaborate more on how the growth of the employment places are correlated to the growth of generated trip rates in the networks. Please advise if the factors of growth number of cars and the growth of economic have been considered in the derivation of the average traffic growth rate in Table 6-2. Please provide more details on how to calibrate and validate the growing trip rates with reference to the surveyed data shown in figure 6-2 in the 2028 Chung Yeung scenario.	In accordance with the guidelines stated in Chapter 3 of Volume 1 TPDM, The "growth factor" method, instead of Modelling Methodology for complex cases, is adopted in this TIA Study to forecast the future traffic demand in the study area. The historical growth, future employment and population data are used as a reference for estimating the background traffic based on the existing traffic flows. Additional peak hour traffic to be generated by the committed and planned developments within the study area are also included (refer to Figure 6-1). To provide conservative estimates, the weekday AM peak hour trips adopted in the respective TIA reports are adopted in this TIA report. It should be noted that in general the AM peak hour trips on a normal weekday are lower than the peak hour trips on Ching Ming which is a public holiday.
TD (A18)	6) Referring to Section 6.3.3 and table 6-3, please elaborate more on the mechanism on how the added trip rates due to the adjacent housing developments are distributed in the networks presented in Figure 6-2.	The distribution and assignment of peak hour trips by the planned and committed developments are extracted from the respective TIA reports.
TD (A19)	7) Referring to Section 5.2.2, the modal splits for visitors by shuttle bus, car/taxi are and public transport/ walk are too extreme that the percent for visitors by car/taxi and public transport/ walk seem to be	The modal splits are referenced to the actual modal splits observed at the surveyed columbarium which, similar to the proposed columbarium, adopt a visit-by-appointment system as described in Paragraph 5.1.1. As the proposed columbarium will adopt a similar

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	underestimated. Please provide justification for this assumption.	visit-by-appointment system and hence it is considered appropriate to reference the modal split observed at the surveyed columbarium for this study.
TD (A20)	8) The model layout presented in Figures 6-3 and 6-4 does not reflect the newly constructed road networks under the housing development of Tuen Mun Area 54. The Applicant should seem more information from CEDD for the future road layouts and update the current model network accordingly.	Figures 6-3 and 6-4 are updated to include the future road layouts obtained from CEDD "TIA Review Report for Agreement No. CE38/2011(CE) Formation, Roads and Drains in Area 54, Tuen Mun - Phases 1 and 2 - Review of Traffic, Environmental, Drainage and Sewerage Impact Assessment - Investigation". It should be noted that the road networks were further reviewed and updated by Hong Kong Housing Authority under approved planning application A/TM/499 and A/TM/500. As shown in Figure 6-3, the amount of additional development flows on the new road would be insignificant.
TD (A21)	9) Referring to section 6.5.1, the existing access road from Hing Fu Street to the proposed columbarium site is a sub-standard village road. The Applicant should assess the feasibility whether this village road can be improved to single-lane two-way carriageway with footpath to cater for the additional traffic flow to-/ from the Applicant Site during visiting peak seasons.	The proposed access road is widened as far as practicable to around 4.3m – 5.6m with a 1.5m footpath on the southern side and 3 passing bays. Further widening is not feasible due to severe site constraints such as existing graves. With the provisions of the proposed shuttle bus services, the access road will be sufficient to cope with the anticipated demand during grave sweeping festival periods.
TD (A22)	10) Please supplement with the assessment of the existing footpath whether its capacity is sufficient for the significant increase in pedestrians along Hing Fu Street.	The level of services of the existing footpath is included in Section 2.4 and Section 6.5 of the Consolidated TIA Report (see **Appendix IX**).
TD (A23)	3. Please note that the comments related to public transportation services and shuttle bus arrangement for the captioned Application will be provided by our Transport Operations (NT) Division separately.	Noted.

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Comments on the F.I. (I) received on 8.1.2020		
TD (B1)	Previous TD(A4) dated 19.8.2019 refers The applicant should also seek comments from FEHD.	No comment from FEHD has been received yet.
TD (B2)	Previous TD(A5) dated 19.8.2019 refers The comment is not addressed. Please provide emergency plan in case there are exceeding private vehicles.	In the event of having large number of private vehicles and taxis convey worshippers to TKLY for worship via Hing Fu Street during the festive days, in particular during the peak hour period, the Applicant will deploy sufficient manpower to Hing Fu Street and its roundabout (R/A) for traffic and crowd management and if necessary liaise with Police for the implementation of an emergency traffic plan on Hing Fu Street R/A. The emergency plan for traffic and crowd management includes the following measures, namely :- (a) To set up pick up/drop off point at Hing Fu Street R/A near to unnamed concrete slop road leading to TKLY for private vehicles and taxis to drop off worshippers thereat for accessing the unnamed concrete slip road for TKLY for worship; (b) Police will be requested to clear all the illegal parking on eastbound (E/B) & westbound (W/B) Hing Fu Street bet. Hing Fu Street R/A and Hing Fu Street/Ming Kum Road junction to facilitate in-coming vehicles to line up on Hing Fu Street W/B lane heading for the pick up/drop off point set up at Hing Fu Street R/A; (c) Traffic Wardens employed by TKLY will be deployed at Hing Fu Street R/A to assist Police in regulating the movement of vehicles and to guide worshippers approaching TKLY. Traffic Wardens will also be deployed evenly along Hing Fu Street to assist Police in regulating traffic movement along the street concerned; (d) Vehicles after dropping off passengers will

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		immediately be guided to depart Hing Fu Street R/A heading for Hing Fu Street E/B lane for Ming Kum Road to leave the area; (e) If the number of in-coming vehicles onto Hing Fu Street become increased, e.g. during peak hour period, Police at scene will be requested to deploy duties to Hing Fu Street/Ming Kum Road junction to regulate traffic so as to ensure that the least disruption is caused to nearby area. (f) Sufficient security personnel will also be deployed at Hing Fu Street R/A and along the Hing Fu Street W/B pavement to regulate visitors going to TKLY on foot. (g) Traffic wardens will also be deployed to the vehicle accesses to Po Tin Estate on Hing Fu Street to observe the traffic situation thereat and to ensure the vehicle accesses are no blocked by any vehicles. (h) Directional signs indicating the pick up/drop off point and the direction of the line up of vehicles on Hing Fu Street R/A and Hing Fu Street W/B will be placed at appropriate locations along Hing Fu Street to guide private vehicles. The aforesaid emergency plan has been included in the Management Plan accordingly.
TD (B3)	<u>Previous TD(A6) dated 19.8.2019 refers</u> The travelling time should be calculated based on the worst case scenario.	Noted. Travelling Time from Proposed Development to Siu Hong Station PTI = 4.8 minutes (4km distance / 50 kph = 4.8 minutes) Travelling Time from Siu Hong Station PTI to Proposed Development = 5.5 minutes (4.6km distance / 50 kph = minutes) Assumed Waiting Time equals to the cycle time at each signalized junction:

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		J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street – 120 seconds J8: Tin King Road / Ming Kum Road – 90 seconds (1.5minutes) J9: Tsing Tin Road / Ming Kum Road – 145 seconds (2.4 minutes) Total Travelling Time for a Circular trip = 4.8 + 5.5 + (2 + 1.5 + 2.4) x 2 = 22.1 minutes. Hence, the total journey time for a circular trip including boarding and alighting times would be around 25 minutes, i.e. 2 round-trips per shuttle bus per hour. As a result, around 2-3 nos. of shuttle bus would be required to provide 5 trips at a frequency of 12 min to cope with the demand of 120 visitors per hour.
TD (B4)	<u>Previous TD(A8) dated 19.8.2019 refers</u> Please indicate the exit route and it should be separated from the holding areas and signage in Chinese version should also be provided. Please also advise if visitors and vehicles are using the same entrance & advise the management for in-flow, out-flow of both people and vehicles. Besides, please advise necessary measures for crowd management (including people and vehicles) or any temporary traffic arrangement outside the proposed site.	The exit routes for worshippers on foot, shuttle buses and private cars are already included in Plan 'F' & Plan 'G' of Annex F of the Management Plan which are in the form of red arrows drawn on both sketches. TKLY has only one entrance & exit, which is located on the western end of TKLY Site. Signage in Chinese version showing the direction of exit will be placed at appropriate locations within TKLY to guide visitors. Visitors on foot and vehicles entering/leaving TKLY will use the same entrance/exit and TKLY will deploy sufficient manpower at different locations inside the site such as at the shuttle bus bay area, the P/Cs drop-off area, the P/Cs parking areas, locations o/s each columbarium block, at the entrance/exit, along the unnamed village footpath for both traffic and crowd management with a view to ensuring safety of the visitors and vehicles. A command post will be set up at the admin office of TKLY to command/oversee the festive operations. Security personnel deployed at the

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		entrance/exit will liaise with the command post and those deployed at the holding area for the proper regulation of the in-flow/out-flow of visitors. When vehicles need to enter into/depart from TKLY, the security personnel deployed at the entrance/exit will temporarily stop the in-flow and out-flow of visitors on foot so as to allow vehicles to pass through the entrance/exit in a safe manner. Again, security personnel will be deployed along the unnamed concrete slip road to regulate visitors and vehicles movement in order to ensure safety of all. A temporary traffic arrangement will be set up outside the proposed site on Hing Fu Street R/A where a pick-up/drop-off point will be set up thereat for the alighting of visitors from private vehicles and sufficient security personnel will be deployed thereat for both traffic and crowd management.
TD (B5)	Previous TD(A9) dated 19.8.2019 refers Noted that the management plan will be further submitted for review.	Noted. The Management Plan has been updated in **Appendix X**.
TD (B6)	Previous TD(A10) dated 19.8.2019 refers Noted that the management plan will be further submitted for review.	Noted.
TD (B7)	Previous TD(A11) dated 19.8.2019 refers Noted that the management plan will be further submitted for review.	Noted.
TD (B8)	Previous TD(A13) dated 19.8.2019 refers Please provide the swept path for shuttle bus, the size of loading/unloading area and queueing area.	The swept paths of shuttle bus are shown in Appendix C of the Consolidated TIA Report. The size of the loading/unloading area and queueing area are indicated in the revised Figure 3-1 of the Consolidated TIA Report in **Appendix IX**.
TD (B9)	Previous TD(A14) dated 19.8.2019 refers Please provide the data for Chung Yeung for comparison.	The 2018 Chung Yeung peak hour flow data and junction assessment results, extracted from the

<table>
<tr><th>Date</th><th>Items</th><th>The Applicant's Responses</th></tr>
<tr><td></td><td></td><td>earlier version of TIA Report (dated June 2019), have been provided in Annex B of Appendix I (i.e. Supporting Traffic Documents) of F.I. (II).</td></tr>
<tr><td>TD
(B10)</td><td><u>Previous TD(A15) dated 19.8.2019 refers</u>
Refer TD(14): The peak hour traffic flows occurred in 2019 Ching Ming. Please clarify if the junction performance and calculations are based on 2019 Ching Ming data.</td><td>The junction performance and calculations in the revised TIA Report (dated November 2019), which was prepared for the submission of F.I. (I), are based on 2019 Ching Ming data.

Whereas the junction performance and calculations in the earlier version of TIA Report (dated June 2019) are based on 2018 Chung Yeung data.</td></tr>
<tr><td>TD
(B11)</td><td><u>Previous TD(A18) dated 19.8.2019 refers</u>
The comment is not addressed. Please elaborate how the traffic data is distributed to the network.</td><td>Table 6-3 of the revised TIA Report (dated November 2019), which was prepared for the submission of F.I. (I), shows the weekday peak hour traffic to be generated by Tuen Mun Area 54 development by CEDD, i.e. Site 1 and 1A, Site 2, Site 3 and 4 (East), Site 3 and 4 (West), Site 4 (South), site 4A (East), Site 4A (West) and Site 5 (extracted from the approved TIA Report for the approved Planning Applications (A/TM/499 and A/TM/500) submitted by Hong Kong Housing Authority in 2017) and also by Tuen Mun Area 29 West (extracted from the approved TIA Report for the approved Planning Applications (A/TM/547) submitted by Hong Kong Housing Authority in 2017).

However, it is noted that the peak hour traffic was derived based on the relevant peak hour trips rates on normal weekdays as stipulated in TPDM. With reference to the 2018 traffic flows across ATC Core Station No. 5001 (Tuen Mun Road) as shown in the table below, the traffic flows (vehicle/hour) during the peak hour on a Sunday is generally around 50% less than the AM peak hour flows on a normal weekday:

<table>
<tr><td></td><td>Weekday (Mon-Fri)</td><td>Sunday</td><td>% difference</td></tr>
<tr><td>Southbound</td><td>4,430</td><td>2,400</td><td>-54.2%</td></tr>
<tr><td>Northbound</td><td>3,730</td><td>1,890</td><td>-50.7%</td></tr>
<tr><td>Total</td><td>8,160</td><td>4,290</td><td>-52.5%</td></tr>
</table>
</td></tr>
</table>

Date	Items	The Applicant's Responses
		Thus, the peak hour traffic to be generated by the new developments on a Sunday is derived by applying the following adjustment factors to the weekday AM peak hour traffic: For all residential flats = -30% For Kindergarten/ Primary schools/ Secondary schools = -90% For all other land uses = no change Based on the above adjustments, the estimated peak hour trip generations to be generated by the planned developments on a Sunday are also shown in Table 6-3 as attached in Consolidated TIA Report. All of the above development traffic in Area 54 and Area 29, i.e. A/TM/499, A/TM/500 and A/TM/547, as well as the development traffic to be induced by the Proposed Columbarium at Tsing Wan Kun, Tuen Mun (A/TM/548), are added to the 2028 Background Traffic to derive the 2028 Reference Traffic Flow. Figure 6-2 (2028 Reference Flows) and Figure 6-4 (2028 Design Flows) are updated accordingly as attached in the Consolidated TIA Report. Based on the updated flows, Table 6-4 "2028 Peak Hour Performance of Key Junctions" is also revised and attached in the Consolidated TIA Report (see **Appendix IX**).
TD (B12)	<u>Previous TD(A19) dated 19.8.2019 refers</u> Please compare if the nature of two sites are similar, including consideration of walking distance to nearby public transports. The pedestrian can walk to the proposed site from Hing Kwai Street/ Po Tin area.	The surveyed columbarium is around 1.5km from the nearby bus-stops at Tai Po Road near Tai Wai with around 25 min. of walking time. The proposed columbarium is around 1km from the nearby bus-stops at Ming Kum Road near Goodrich Garden with around 15 min of walking time. While the walking distances of both sites do not appear to be excessive, it is the hilly terrain and level differences along the walking routes which make the walking mode unattractive in particular when free shuttle bus services are available. For example, walking from Hing Fu

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		Street near Po Tin Estate to the proposed columbarium involve a level change of around 35m, i.e. around 15-storeys of height, and hence the walking route is not considered attractive compared to the free shuttle bus service available near the MTR station.
TD (B13)	Previous TD(A20) dated 19.8.2019 refers Please advise how the traffic data distributed in the network referring to the response of TD(A18).	The derivation of 2028 Reference Flows (i.e. Figure 6-2) is described in TD(A11) above. The distribution of development traffic by the Proposed columbarium is shown in Figure 6-3 of the Consolidated TIA Report. The shuttle bus traffic by the proposed columbarium is distributed and assigned onto the road network according to the proposed shuttle bus route shown in Figure 4-1. All private car traffic distributed to other districts are anticipated to access / leave the proposed columbarium via the junctions with Tsing Tin Road e.g. Tuen Mun Road.
TD (B14)	Previous TD(A21) dated 19.8.2019 refers Please provide layout showing the road widening works. Please also seek comment from HAD as the village road is managed by HAD.	Noted. The layout plan of the proposed road widening works is shown in Figure 6.7 of the Consolidated TIA Report.
TD (B15)	Previous TD(A24) dated 19.8.2019 refers Please advise the size of queueing area at Siu Hong Station PTI and the crowd management. Please also coordinate with MTRCL regarding crowd managing and signage arrangement as visitors may travel from Siu Hong Station to the shuttle bus stop.	Noted. Figure 4-2 is revised to show the size of queueing area and the management staff/security guards (see **Appendix IX**). As shown in the figure, management staff/ security guards will be assigned to station at the general lay-by in West Rail Siu Hong Station to regulate and control passenger queuing at the lay-by and only visitors with valid proof of booking confirmation could be allowed to use the free shuttle bus service.
TD (B16)	There is another application "Application for Proposed Columbarium within Tsing Wan Kun, Tuen Mun (Application No. A/TM/548 under s.16 of the Town Planning	Noted. The additional traffic by the Proposed Columbarium within Tsing Wan Kun, Tuen Mun (Application No. A/TM/548) is added as described in TD(B11) above.

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	Ordinance)" which proposed shuttle bus services. The pick up point is at Siu Hong Station PTI as well. The combined effect on traffic and crowd management should be considered.	As shown in Figure 4-2, sufficient queueing spaces will be available for the shuttle bus services by the above Applicant. According to TPDM Vol. 9, Chapter 2.7, Paragraph 2.7.6.5, the total layover time of the proposed shuttle bus services is calculated as follows: Peak Bus Allocation = 11 Peak Frequency = 2.5 mins Peak Bus Allocation x peak frequency = 11 x 2.5 = 27.5 Total round trip time = 25 mins Total excess time (layover) = (27.5-25) mins = 2.5 min According to TPDM Vol. 9, Chapter 2.7, Paragraph 2.7.6.6, the results in a layover of 2.5 minutes, which will usually be divided equally at each end of the route. In this case, the layover time is smaller to the frequency and this should mean that only one bus is on the stand at any one time. Similarly, referring to the TIA report of Planning Application No. A/TM/548 published by PlanD, the total layover time of the proposed shuttle bus services is calculated as follows: Peak Bus Allocation = 4 Peak Frequency = 8.6 mins Peak Bus Allocation x peak frequency = 4 x 8.6 = 34.4 Total round trip time = 30 mins Total excess time (layover) = (34.4-30) mins = 4.4 mins Thus, one bus bay is required on the stand for the development. There would be an accumulative of 2 bus bays required for both services, which is equivalent to a layby length of 16m required (Considering length of 28-seater bus with clearance = 8m). Therefore, sufficient space is available for the both services for picking up/dropping off of

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		passengers. In addition, for the proposed columbarium, based on anticipated peak hour demand (120 passengers) and the proposed bus frequency of 12 mins., a maximum queue of 24 passengers (120 / 60 min x 12 min = 24 passengers) is anticipated as in general the passengers are able to board the first bus after they arrive and wait at the pick-up point. Based on a linear queuing capacity of 4 persons per 1.020m (refers to TPDM Vol. 9, Chapter 2.7, Paragraph 2.7.14.16), Thus, a passenger queue length of around 6.12m is anticipated during the peak period. Similarly, for the Planning Application No. A/TM/548, according to its TIA report published by PlanD, the anticipated peak hour demand (188 passengers) and the proposed bus frequency of 8.6 mins., a maximum queue of 13 passengers (188 / 60 min x 4 min = 13 passengers) is anticipated. Based on a linear queuing capacity of 4 persons per 1.020m, a passenger queue length of around 3.3m is anticipated during the peak period. As show in Figure 4-2 attached, sufficient space is available for the queueing passengers of both columbaria.
TD (B17)	<u>Comments from Transport Operations (NT) Division</u> From operations viewpoint, the Applicant's proposal for provision of shuttle bus service is noted. However, the Applicant's proposal does not imply the granting of approval for non-franchised bus services serving the development. The Applicant is required to submit application to TD for consideration near the time of opening of the development. In determining an application for operation of non-franchised bus services, TD will consider the following factors: i. the need for the services to be	Noted.

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	provided by the applicant; ii. the level of services already provided or planned by other public transport operators; iii. traffic conditions in the areas and on the roads where the services are to be provided; and iv. the standard of service to be provided by the applicant.	
Comments on the F.I. (II) received on 21.8.2020		
TD (C1)	Please provide the schematic plan and TTA plan (including the temporary traffic signs) showing the special traffic management in the management plan.	The Applicant will arrange directional signs be placed at the following locations to guide visitors to access TKLY, namely :- (i) Pavement o/s Tin King LRT Stop; (ii) Western pavement of Ming Kum Road o/s Po Tin PTI and the bus/GMB Stops on Ming Kum Road o/s Po Tin Estate; (iii) Hing Kwai Street western pavement towards Hing Fu Street; (iv) Western Pavement of Hing Kwai Street/Hing Fu Street; (v) Hing Fu Street cul-de-sac roundabout; & (vi) Along Hing Fu Street W/B pavement. Please see the schematic plan and TTA Plan in the Consolidated TIA Report as attached in **Appendix IX** and the updated Management Plan in **Appendix X**.
TD (C2)	Please show the location of L/UL area for PC/Taxi in the management plan during grave sweeping period and provide the assessment for the capacity of L/UL area.	Since the Applicant has planned to close during Ching Ming and Chung Yeung Festival Days and the two Saturdays and Sundays before and after the festival days, which the traffic outside these periods generated by these three nearby columbaria is very minimal. The L/UL for PC/Taxi will be carried out within the site of this application.
TD (C3)	Please seek FEHD and Police on the feasibility and effectiveness on their proposed administrative measures, including appointment system, removal of illegal parking, etc., in the management plan and emergency plan.	Comments from the Police have been received and adequately addressed in the Applicant's submission. Other relevant government departments have no specific comments on the feasibility and effectiveness on the proposed administrative measures and the

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		visit-by-appointment system proposed by the Applicant. In fact, similar administrative measures and visiting arrangements were proposed by other columbaria in their applications, which were accepted and approved by the TPB and the PCLB. Same treatment should be accorded to TKLY. With regard to the removal of illegal parking, it is the duty of the Police to exercise their power under the RTO for the towing and removal of illegally parked vehicles on roads. If serious illegal parking of vehicles takes place on Hing Fu Street during festive days, the Applicant will take the initiative to inform Police to take appropriate towing action with a view to ensuring that Hing Fu Street is free for the traveling of shuttle buses, private cars and taxis.
TD (C4)	Please advise the on site arrangement if visitors did not travel by shuttle services and by PC or taxi and if visitors have not made the appointment during the grave sweeping periods.	The niche buyers and their accompanied visitors are bounded by the visit-by-appointment system stated legally in the sale agreements and they need to adhere to the system otherwise TKLY has the absolute right to deny their access into TKLY during the Festive days. Two months prior to the Festive Periods, staff of TKLY will contact the niche buyers one by one through E-booking system and arrange a specific date and time slot for each batch of visitors to attend the worship inside TKLY. **TKLY will keep record of the visit-by-appointment system for ad hoc checking on site.** These visit-by-appointment systems and related administrative measures were adopted and used by different columbaria all over the territories for the Ching Ming and Chung Yeung Festivals and there was so far no reported chaotic situations took place at Districts and it was noted that over the years, the Ching Ming and Chung Yeung Festivals were run in smooth manner without any untoward incidents occurred. Please rest assure that worshippers are law-abiding citizens and they will adhere to what they have agreed and signed in the sale agreements. The contingency plan mentioned

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		in the Management Plan does cover the ad hoc situation. If situation dictates, under the contingency plan, the Applicant will liaise with Police on site for making appropriate traffic and crowd management, for instance, the temporary or periodical closure of Hing Fu Street to facilitate the movement of worshippers/vehicles to and from TKLY, nevertheless, the occurrence of this situation is highly remote. As far as TD and Police are concerned, every year during Ching Ming and Chung Yeung Festivals, TD will issue Transport Notice for the temporary closures of certain roads and streets in the vicinity of columbaria and cemeteries to facilitate the movement of worshippers to and from these areas and Police of different Districts will deploy appropriate duties at the areas of columbaria and cemeteries for implementing special Traffic Arrangements for traffic and crowd management with a view to ensuring that proper, safe and orderly worshipping activities are conducted every year in the territories. It is believed that TKLY will not be an exception at all.
TD (C5)	<u>Previous TD(B2) dated 8.1.2020 refers</u> Please seek comments from Police. Also, there are other site proposing the use of pick up/ drop off point at Hing Fu Street Roundabout. Please advise how the traffic at Hing Fu Street Roundabout and Hing Fu Street will not be adversely affected due to the combined effects of the columbarium sites.	Comments from the Police have been received and adequately addressed in the Applicant's submission. Other relevant government departments so far do not have any adverse/specific comments on the Management Plan proposed by the Applicant. The Applicant undertakes to liaise with the management of the nearby columbaria located at the unnamed slip road leading up from the Hing Fu Street Roundabout for proper traffic and crowd management. Since the proposed development would not be opened during Ching Ming and Chung Yeung Festival Days and the two Saturdays and Sundays before and after the festival days, there would not be pedestrian/vehicular traffic

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		generated by the proposed development on these days. Similarly, during the opening of the proposed development on weekdays within the shadow period, the traffic generated by other columbaria would be minimal. However, the Applicant could still propose and be prepared for the following Contingency Plan: *TKLY staff and security personnel deployed at the Hing Fu Street Roundabout and on the unnamed slip road leading up to TKLY from Hing Fu Street Roundabout will be vigilant at all time and liaise with the staff and security personnel of the other columbarium deployed at the same location(s) to conduct proper control of traffic and crowd movement to and from the unnamed slip road, the Hing Fu Street Roundabout and Hing Fu Street. Hing Fu Street is relatively long and wide for the temporary stacking of vehicles. As 95% of the visitors will take the free shuttle bus services provided by TKLY, the staff and security personnel deployed at Hing Fu Street Roundabout and the unnamed slip road leading up from it to TKLY will ensure the smooth running of the shuttle bus services to and from TKLY and Hing Fu Street without causing any traffic congestion at the Hing Fu Street Roundabout/Hing Fu Street. At the pick-up/drop-off point at the aforesaid roundabout staff and security personnel will ensure that PCs/Taxis are dropping off visitors in a quick manner and to leave the scene speedily without creating any vehicle blockage at the Hing Fu Street Roundabout or causing any tailback of vehicles on Hing Fu Street.* With the implementation of the Management Plan, the ratio of visitors' attendance is only 200 visitors/hour at TKLY. By calculation, 95% of visitors use shuttle bus services provided by TKLY and only 3% will use PCs/Taxis, the remaining 2% will use public transport to access the site which by calculation is about 6 visitors/hour using PCs/Taxis and is a small number. In any case, in the event of unexpected

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		situation, the Applicant will inform Police to scene for assistance in traffic and crowd management at Hing Fu Street and Hing Fu Street Roundabout as contingency measure only.
TD (C6)	Previous TD(B4) dated 8.1.2020 refers Please advise the control to prevent clashing of in-flow and out-flow inside the site and at the entrance of the site; Please advise the pick up/ drop off point is for shuttle point only or for all vehicles.	Staff and security personnel will be sufficiently deployed at the entrance of TKLY and inside the site including the holding areas, the shuttle bus bay and o/s the 3 columbarium blocks for monitoring and supervising the in-flow and out-flow of vehicles and visitors. They will all equipped with walkie talkies for communication including with the Command Post. The shuttle bus bay is for the use of shuttle bus only.
TD (C7)	Previous TD(B10) dated 8.1.2020 refers Please provide traffic data of 2019 Ching Ming Festival.	Since the Applicant has planned to close during Ching Ming and Chung Yeung Festival Days and the two Saturdays and Sundays before and after the festival days, i.e. no visitors is allowed to visit the site during these periods, the visitors can only visit the application site on weekdays during festival period. The revised TIA is therefore presenting the traffic impact assessment on a typical weekday, which the traffic data is based on traffic survey in 2019.
TD (C8)	Previous TD(B11) dated 8.1.2020 refers Please provide a summary showing the revised RC of junctions.	The revised RC of junctions are summarized in Table 6-7 in the Consolidated TIA report.
TD (C9)	Previous TD(B14) dated 8.1.2020 refers Please advise the width of road connecting to Hing Fu Street.	The local access road connecting to Hing Fu Street is with a width of about 3.5m to 5.5m.
TD (C10)	4th bullet point of Section 5 of the previous Management Plan in F.I. (II) refers Measures to be adopted: Please advise the system can only control the total number of visitors of a day.	The Applicant undertakes to implement a straight **visit-by-appointment system** in future operations during the entire year with a view to ensuring that only a controllable number of worshippers are allowed to access TKLY for worshiping, hence the holding capacity of the columbarium concerned will not be exceeded at

Date	Items	The Applicant's Responses
		any one time and a safe worship situation is provided. Calculation of Visitors' Attendance Per Day TKLY site area = about 3,137m² By adopting the BD's CoP the calculation of columbarium factor of 2m² per person, the site concerned in theory can hold up a maximum of:- **3,137m² ÷ 2**m² = **1,569 persons at any one time** TKLY compound area = about 1,320m² Holding capacity of the compound: 1,320m² ÷ 2m² = **660 persons at any one time** The 6 columbarium halls have an area of 285.2m². Holding capacity = **142.6** persons at any one time. TKLY is proposed to limit the visitors' attendance to not more than 200 visitors per hour during each worship day. Visitors' attendance: the Applicant will implement the visit-by-appointment system (VBAS) **plus free shuttle bus services** for the weekdays of the festival period (i.e. 20 weekdays within the Festival Period where the VBAS will be implemented for the entire year). During Ching Ming and Chung Yeung Festival Days and the two Saturdays and Sundays before and after the festival days, TKLY will be closed. Other than these periods, the operation hours of TKLY during Ching Ming or Chung Yeung Festival Periods will be between **0800 hrs & 1700hrs** daily (9 hrs/day) whereas for the non-Festival Periods, the operation hours will be between **1000 hrs & 1700hrs** daily (7 hrs/day). Assuming by the year of 2025 the niche spaces of TKLY will be fully occupied and interred, i.e. a total of 11,094 niche spaces (ns) occupied. The

Date	Items	The Applicant's Responses
		average niche spaces' visitors are assumed to be 4 visitors per niche. By calculation the daily visitors' attendance amount the 26 days period in average is :- 11,094 ns x 4 visitors/ns = <u>44,376 visitors (total during Festival Period)</u> Attendance during 20 weekdays of the Festival Period: 200 visitors/hr x 9 hrs x 20 days = 36,000 visitors. Attendance during the 6 day non-Festival Period: 44,376 visitors - 36,000 visitors = 8,376 visitors. 8,376 visitors ÷ 6 days = 1,396 visitor/day 1,396 visitor/day ÷ 7 hrs = 199.4 visitors/hr **The above calculation shows that the hourly attendance of visitors to the columbarium is no more than 200 visitors/hr and the figure is well within the holding capacity of the compound of TKLY (660 visitors at any one time)**. By and large, the free shuttle bus arrangement to be adopted will cover a total of 20 weekdays periods within the Festival period.
TD (C11)	<u>Section 7 of the previous Management Plan in F.I. (II) refers</u> Please advise: Impact on road network in the vicinity arising from visits to the columbarium and the proposed mitigation measures, Loading and unloading facilities & Parking facilities.	As per the response in TD(C10) the number of visitors at TKLY will only be 200 visitors/hr and as per calculation 95% of the visitors will choose to use shuttle bus services provided by TKLY and only 3% will either drive or use taxis to access TKLY. By calculation as stipulated in the Management Plan, TKLY will provide about 5 trip/hr of shuttle bus services for conveying visitors from Siu Hong Stn North PTI to TKLY and no parking facilities will be provided for visitors except from the disabled and elderly with advance visit-by-appointment through E-booking. It is anticipated that disabled and elderly are very limited without adding any pressure to the nearby traffic. It is therefore

Date	Items	The Applicant's Responses
		opined that with the implementation of shuttle bus service coupled with the limited number of PCs to convey disabled/elderly into TKLY per day and the limited number of PCs/Taxis for L/UL activities within the site during any one day of the aforesaid 20 days period, the **impact on road network in the vicinity of TKLY per hour each day will not be significant.** In any case, a contingency plan is written in the Management Plan to serve as an emergency/mitigation plan to cater for/manage any ad hoc or unexpected situation. In addition, the Applicant will inform the Police in advance about their operation plan on how to manage the visitors throughout the aforesaid 20 days period across the festival months and will also inform Police to attend scene for traffic and crowd management, if their attendance is required.
TD (C12)	Section 10 of the previous Management Plan in F.I. (II) refers Please advise direction of pedestrian flows including at the unnamed road towards the columbarium.	Given the shuttle bus, PCs/Taxi will carry out L/UL within the site, there would be very minimal pedestrians walking to the site via the unnamed road.
TD (C13)	It is assumed high percentage of visitors will use the shuttle bus services. Please provide more evidences to support this assumption (the proposed site is close to Po Tin Estate and some villages, and should be easier to access comparing to the site in Tai Wai). Please provide a sensitive analysis if much less visitors use the shuttle bus services.	Similar to the Proposed Development, the referenced columbarium at To Fung Shan in Tai Wai is a private columbarium development situated at the upper level of a hilly terrain with shuttle bus provided. According to the observation, around 97.3% of the daily person trips use the free shuttle bus services for entering and leaving the surveyed columbarium in Tai Wai during Ching Ming Festival Day. Out of the remaining 2.7% of daily trips, only one car trip was recorded and all others are taxi trips. Sensitivity test has been carried out in case less visitors use the shuttle bus services. By increasing the percentage of visitors not using the car/taxi from **3% to 38%**, and lowering the percentage of the visitors using the shuttle bus from 95% to 60%. As shown in Table 6-11 of the

Date	Items	The Applicant's Responses
		Consolidated TIA report, all the key junctions in the Study Area would perform satisfactorily, except junction J8, which would become marginal after the operation of the application site. However, the junction performance could be improved by increasing the cycle time to 120 seconds to accommodate all the traffic generated by existing, approved and planned columbaria and Proposed Development.
TD (C14)	It was observed that illegal parking occurs along Hing Fu Street. Please advise if any measures to be taken if illegal parking is found during Ching Ming/ Chung Yeung period, which will seriously affect the traffic and the shuttle bus services. Also, please advise if the assessments have catered for this situation.	Hing Fu Street is wide enough for two-way traffic even with a few illegal parking take place on the street. In severe illegal parking situation on Hing Fu Street during Ching Ming and Chung Yeung Festivals, the Applicant will inform Police to exercise towing action to ensure that the street concerned is wide and safe enough for the traveling of shuttle bus provided by TKLY and the traveling of PCs and Taxis. To place safe and to alert the Police regarding illegal parking on Hing Fu Street during the Festive periods, the Applicant will forewarn the Police about the possible occurrence of this situation prior to each Festive period for the Police to prepare taking appropriate action.
TD (C15)	There are other columbaria nearby under planning applications. Please take those applications into account in the assessment and reconcile the management plan with those applications.	There are three nearby columbaria considered in the Consolidated TIA report. Since the applicant has planned to close in Ching Ming Festival, Chung Yeung Festival and the two festival shadow periods' weekend, which the traffic outside these periods generated by these three nearby columbaria is very minimal.
Comments on the F.I. (III) received on 27.1.2021		
TD (D1)	<u>Previous TD(C1) dated 21.8.2020 refers</u> Please provide the TTA at Yan Po Road as well. Normally, TTA is arranged and handled by the project proponent and the TTA drawings have to be agreed by Police and TD. Please advise the responsible party for TTA implementation.	TTA is proposed for providing guidance to pedestrian accessing the site from main public transport facilities, such as Tin King LRT Station. The TIA report has been updated and attached in **Appendix IX**. Yan Po Road is included in the revised figure. It is noted that Yan Po Road was commissioned

Date	Items	The Applicant's Responses
		in late 2020, and there are currently only two bus routes stopping at Yan Po Road, including one special route operating during midnight only. Thus, it is considered no visitor walking to the site from Yan Po Road. The TTA on Yan Po Road is considered not necessary at this stage. Nevertheless, the Applicant will review the traffic condition in the vicinity of the Application Site during the festival period and the proposed TTA will also be reviewed periodically. Besides, the Applicant is responsible party for the implementation of the proposed TTA. The proposed TTA have been added and included as part of management plan in the updated TIA report.
TD (D2)	Previous TD(C2) dated 21.8.2020 refers The location of L/UL area for PC/Taxi is outstanding.	Location of L/UL space for PC / Taxi is within the Application Site as shown in Figure 3-1 in the updated TIA report. One space will be provided for car/taxi pick-up/drop-off activities on normal days. During the weekdays within festival periods, the 10 car parking spaces will be closed for parking, but open for car/taxi pick-up/drop-off activities.
TD (D3)	Previous TD(C3) dated 21.8.2020 refers The effect of illegal parking and queuing vehicles to the site may block the vehicular accesses to Po Tin Estate. It is noted that the applicant will take the initiatives to inform Police to take appropriate actions if serious illegal parking is found. The mechanism should be reflected in the management plan.	To tackle with possible illegal parking on Hing Fu Street which may affect the vehicular accesses to Po Tin Estate, the Applicant will deploy security personnel at the scene to observe the traffic situation thereat. If serious illegal parking of vehicles takes place on Hing Fu Street during festive periods, the staff will take the initiative to inform the Police, who has right to exercise powers under the RTO, to take appropriate towing action to remove illegally parked vehicles on roads with a view to ensuring that Hing Fu Street is free for the traveling of shuttle buses, private cars and taxis. Para 4.4.2 is added in the Consolidated TIA Report for the proposed actions. Such mechanism has also be reflected in the updated Management Plan as attached in **Appendix X**.

<table>
<tr><th>Date</th><th>Items</th><th>The Applicant's Responses</th></tr>
<tr><td>TD
(D4)</td><td><u>Previous TD(C5) dated 21.8.2020 refers</u>
The combined effects on traffic from different columbarium sites near Hing Fu Street shall be considered. Please liaise with PlanD on the information required.</td><td>According to the published information from TPB, there are three other proposed columbarium developments near TKLY.

<table><tr><th>Location</th><th>No. of Niches</th></tr><tr><td>[Y/TM/24] 光孝仙苑</td><td>5,670</td></tr><tr><td>[Y/TM/25] 祥隆精舍</td><td>5,418</td></tr><tr><td>[Y/TM/26] 益豐精舍</td><td>4,942</td></tr></table>
While the application site will open only on weekdays during the festival period, the combined effects on traffic were assessed and updated in the TIA report.</td></tr>
<tr><td>TD
(D5)</td><td><u>Previous TD(C7) dated 21.8.2020 refers</u>
As there are some others columbarium sites near Hing Fu Street, visitors will visit the other sites close to Ching Ming and Chung Yeung Festivals.

Therefore, please clearly define the opening period of the proposed site in the management plan.</td><td>The application site will be closed during Ching Ming and Chung Yeung Festival Days and the two Saturdays and two Sundays before and after the festival days. The opening period and operation hours are summarized and presented in Table 4-1 The opening period of the proposed site would be like the following:

<table><tr><th>Time Period</th><th>Operation Hours</th></tr><tr><td>Festival Period
• Festival Day (Ching Ming / Chung Yeung Festival)
• Two Saturdays and Two Sundays before the Festival day
• Two Saturdays and Two Sundays after the Festival day</td><td>The Columbarium will be Closed (Total 9 days)</td></tr><tr><td>Festival Period – Weekdays (Monday – Friday)</td><td>08:00 – 17:00</td></tr><tr><td>Non-Festival Period – Daily (Monday – Sunday)</td><td>10:00 – 17:00</td></tr></table>
The information has included in the updated TIA Report and Management Plan.</td></tr>
<tr><td>TD
(D6)</td><td><u>Previous TD(C11)/ TD(C13) dated 21.8.2020 refers</u>
The assessment is correct based on the assumption that 95% of visitors will take shuttle bus to the proposed site. Please justify this percentage with more comparisons from other sites.</td><td>The assumption 95% of visitors taking shuttle bus is based on the actual survey records at a private columbarium development at To Fung Shan in Tai Wai during 2018 Ching Ming Festival, which the shuttle bus service is currently in operations. Reference are also</td></tr>
</table>

<table>
<tr><th>Date</th><th>Items</th><th>The Applicant's Responses</th></tr>
<tr><td></td><td></td><td>found in TIA report of approved columbarium, which are summarized in the table below:

<table>
<tr><th>Description</th><th>Status</th><th>Shuttle Bus Modal Ratio</th></tr>
<tr><td>Proposed Columbarium Development at To Fung Shan</td><td>Existing Use</td><td>>94%</td></tr>
<tr><td>Traffic Impact Assessment Study For Columbarium Development at Kwai Chung</td><td>Approved</td><td>90%</td></tr>
<tr><td>Proposed Columbarium in Wing Lap Street No. 2-6 (Application No. Y/KC/3)</td><td>Approved (2013 Dec)</td><td>65%</td></tr>
<tr><td>Proposed Columbarium in Wing Lap Street No. 2-6 (Application No. A/KC/437)</td><td>Approved (2016 Sep)</td><td>65%</td></tr>
</table>

Besides, sensitivity test is conducted assuming that only 60% of visitors taking shuttle bus services to application site. The sensitivity test has been updated in the TIA report.</td></tr>
<tr><td>TD
(D7)</td><td><u>Previous TD(C13) dated 21.8.2020 refers</u>
The sensitivity analysis on pedestrian flow shall also be assessed.</td><td>The sensitivity analysis on pedestrian flow has been included in the updated TIA report.</td></tr>
<tr><td>TD
(D8)</td><td><u>Previous TD(C14) dated 21.8.2020 refers</u>
Hing Fu Street is only around 7m wide and narrow than 7m near the cul-de-sac. The sentence "Hing Fu Street is wide enough for two-way traffic even with a few illegal parking take place on the street" is incorrect.

An assessment on assuming Hing Fu Street as single track road should be provided (effect accounting illegal parking along Hing Fu Street).</td><td>According to Table 2.4.1.1 of TPDM, for local roads, the design flow of a 2-lane single carriageway (without mention the road width) may be taken as 800 veh/h, 2-way, due to the presence of loading activities, standing vehicles and pedestrian crossings. Thus, based on the road characteristics, peak hour link performance of Hing Fu Street has been assessed. The link assessments are shown in Table 2-4, Table 2-5, Table 6-8 and Table 6-12 in the Consolidated TIA Report.

It is also understood that there may be slower traffic at Hing Fu Street during the weekdays within festival periods, which will affect the operation of the proposed shuttle bus services, due to the illegal parking. Thus, staff by Applicant will patrol frequently to observe the traffic situation on Hing Fu Street. The staff will take appropriate actions if serious illegal parking is observed.</td></tr>
</table>

Date	Items	The Applicant's Responses
TD (D9)	Previous TD(C15) dated 21.8.2020 refers It should be coordinated with other columbarium sites in particular to the opening period, L/UL areas, etc. It is noted that the proposed site will only opened in weekdays. However, the opening period of other sites are not yet confirmed. And the combined effects on traffic from all the columbarium sites near Hing Fu Street are not determined.	Please find attached the supplementary information provided by our legal advisor in response to your concerns in relation to the co-ordination with other columbarium sites near Hing Fu Street (see **Appendix V**). Nevertheless, as coordinated opening period with other columbaria, the Applicant will close the application site during Ching Ming and Chung Yeung Festival, and the two Saturdays and two Sundays before and after the festive day, so as to minimize the traffic impact in the vicinity of the site.
TD (D10)	Table 4-2 of the previous TIA in F.I. (III) refers Refer to the special traffic arrangement at Tsang Tsui in Chung Yeung 2020, the implementation of special traffic arrangement took 5 weeks i.e. 2 weeks before festival day, the week of festival day and 2 weeks after festival day. Please review the time period.	In order to minimize the traffic impact, to the surroundings and the traffic noise impact to the schools nearby, the applicant site proposed to further control the number of visitors with hourly limit of 200 persons accessing the site. Thus, the festival period is extended in order to digest the peak demand during general festival period. As summarized in Table 4-2 of the updated TIA report, the proposed festival period is revised and referred as the period between two Saturdays/two Sundays before and after the Festival day.
TD (D11)	Section 6.6 of the previous TIA in F.I. (III) refers Please justify the figure 60%. It is noted that the RC of J5 and J7 is marginally. Please be reminded that the project proponent has the duty to conduct a TIA and to carry our mitigation measures so identified with a view to restoring the v/c, DFC and RC of the affected roads or junctions to <=0.85, <=0.85 and >=15% respectively as far as practicable.	As refer to response to comment item (D6), with reference to the modal split assumption adopted in the approved columbarium cases, it is conservative on the sensitivity test with adoption of 60% of visitors taking shuttle bus services to application site. The results in the updated TIA report indicated that that the junction performance of J5 and J7 would become marginal in future year of 2028, even without the application site. However, the junction performance could be further improved by increasing the cycle time to 125 seconds for J5 and 120 seconds for J7.

Date	Items	The Applicant's Responses
		In addition, according to the traffic impact assessment results, the junction performance of J8 would become marginal after the operation of the application site, which however, the junction performance could also be improved by increasing the cycle time to 120 seconds to accommodate all the traffic generated by existing, approved and planned columbaria and proposed columbarium.
TD (D12)	Section 6.7 of the previous TIA in F.I. (III) refers Please review to provide lay-by along the unnamed road to the proposed site.	The proposed road improvement is reviewed to provide one more lay-by at the unnamed road which is shown in **Figure 6-7** of the updated TIA report.
TD (D13)	Yan Po Road has been opened to public. The TIA should be updated based on the new road networks.	The figures are revised to include Yan Po Road in the updated TIA report.
Comments on the F.I. (V) received on 9.4.2021		
TD (E1)	The applicant stated that the traffic impact of the religious activities is insignificant considering small number of visitors and the religious activities have already happened. The applicant shall substantiate the following information:- 1. Please advise the maximum number of visitors that can be accommodated in the proposed site including the open space area.	The maximum holding capacity of the proposed site would be derived in view of "Code of Practice for Fire Safety in Buildings", the Occupancy Factor for columbarium is adopted as $2m^2$/person. Considering the total indoor area of Block 3 (the back up indoor place for the religious activities) is about $106m^2$, together with the two open spaces area for the religious activities of about $122m^2$, at most (106+122) / 2 =114 visitors for the religious activities can be accommodated in the proposed site.
TD (E2)	2. Please advise the maximum number of visitors in the period other than Ching Ming and Chung Yeung Festival Periods	According to the schedule in the future, the religious lecture / training will be provided once every Saturday and Sunday, i.e., one class on

<table>
<tr><th>Date</th><th>Items</th><th>The Applicant's Responses</th></tr>
<tr><td></td><td>and other festivals that will attract significant number of visitors. Please also advise the anticipated peak period visiting the site for religious activities.</td><td>Saturday and one class on Sunday, over the non-grave sweeping festival periods. In addition, each lecture / training class will have not more than 20 students, and 20 would be the maximum visiting number in the period other than Ching Ming and Chung Yeung Festival Periods.

In addition, the proposed lecture / training class would be offered during the non-peak period on Saturday and Sunday, e.g. start before 9:30 am leave around 12:00pm. Therefore, it is anticipated that peak hour visiting for religious activity will happen on the non-peak period on Saturday / Sunday correspondingly.</td></tr>
<tr><td>TD (E3)</td><td>3. The TIA stated that shuttle bus will be provided during Ching Ming and Chung Yeung Festival Periods. Please advise the mode of travel in the period other than Ching Ming and Chung Yeung Festival Periods i.e. ratio of visitors using Car/Taxi and Public Transport/ Walk. Please also advise the LOS of footpaths at Hing Fu Street in the period other than Ching Ming and Chung Yeung Festival.</td><td>As stated in response in TD(E2), the religious lectures and training activities will be arranged regularly once every Saturday and Sunday during the non-grave festival sweeping periods, and at most 20 students would be served daily. To minimize the traffic impact to the road network, students will be encouraged to use public transport (franchised bus and light rail transit) to reach the application site, and the public transport is of capability to absorb the travel due to the small number of students. In addition, car park spaces will not be provided to students.

On this occasion, no additional vehicles will be induced by the proposed site, and the mode of travel and estimated peak hour trips other than Ching Ming and Chung Yeung Festival Period would be estimated as the following:

<table>
<tr><th rowspan="2">Mode</th><th rowspan="2">Percentage</th><th colspan="2">In</th><th colspan="2">Out</th></tr>
<tr><th>Visitor/ hr</th><th>Veh./ hr</th><th>Visitor/ hr</th><th>Veh./ hr</th></tr>
<tr><td>Shuttle Bus (1)</td><td>0%</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Car/Taxi(2)</td><td>0%</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Public Transport /Walk</td><td>100%</td><td>20</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Total</td><td>100%</td><td>20</td><td>0</td><td>20</td><td>0</td></tr>
</table>

In the meanwhile, at most 20 visitors will be induced by the proposed site on Hing Fu Street.</td></tr>
</table>

Date	Items	The Applicant's Responses
		Please be noted that, the 20 students will arrive / leave successively over time but not intensively, so in reality, the arrival / departure of the 20 pedestrians will be distributed through different hours for calculation consideration. To be more conservative, we assume all visitors arrive / leave within 5 minutes. Thus, by applying the 20 pedestrians onto the road network onto a higher side scenario of the pedestrian number, i.e., in 2028 weekday scenario, the LOS on Hing Fu Street would still be all in A level. Moreover, even by tripling the trips of 20, i.e., to 60 trips per 5 minutes, the LOS of Hing Fu street will still all be in A level. The detailed calculation results are tabulated in the following table:

Level of Services (LOS) of Concerned Footpaths on Hing Fu Street in 2028 weekday design scenario of 20 additional pedestrians

Pedestrian Link(1)	Effective Width(2)	Peak 5-minute Flows (2028 Weekday AM) [2028 Weekday PM]	PMM(3)	LOS(4)
P1	1.5	(49)[51]	(6.6)[6.8]	(A) [A]
P2	1.5	(36)[37]	(4.8)[4.9]	(A) [A]
P3	1	(30)[29]	(6)[5.8]	(A) [A]

Notes: (1) Refers to Figure 2-6 for locations of pedestrian links
(2) Effective Width = Footway Width – 0.5m of shy zone
(3) PMM = Pedestrian flow per minute per meter
(4) Refer to Appendix B for descriptions of LOS
(5) 5-min trips from the proposed site: 20

Sensitivity test on Level of Services (LOS) of Concerned Footpaths on Hing Fu Street in 2028 weekday design scenario of 60 additional pedestrians

Pedestrian Link(1)	Effective Width(2)	Peak 5-minute Flows (2028 Weekday AM) [2028 Weekday PM]	PMM(3)	LOS(4)
P1	1.5	(89)[91]	(11.9)[12.1]	(A) [A]
P2	1.5	(76)[77]	(10.1)[10.3]	(A) [A]
P3	1	(70)[69]	(14)[13.8]	(A) [A]

Notes: (1) Refers to Figure 2-6 for locations of pedestrian links
(2) Effective Width = Footway Width – 0.5m of shy zone
(3) PMM = Pedestrian flow per minute per meter
(4) Refer to Appendix B for descriptions of LOS
(5) 5-min trips from the proposed site: 60

<table>
<tr><th>Date</th><th>Items</th><th>The Applicant's Responses</th></tr>
<tr><td>TD
(E4)</td><td>4. Please compare the trip generation and attraction for vehicles and pedestrian arising from religious activities and columbarium uses for the site under application and justify whether the scenario assessed in the TIA for columbarium use is the most critical case. Please supplement with additional scenario for religious use if it is found to be more critical.</td><td>The peak hour trip generation and attraction for vehicles and pedestrian arising from columbarium use which was assessed in the TIA is tabulated as below:

<table>
<tr><th rowspan="2">Mode</th><th colspan="3">In</th><th colspan="3">Out</th></tr>
<tr><th>Visitors/ hr</th><th>veh/ hr</th><th>PCU/ hr</th><th>Visitors/ hr</th><th>veh/ hr</th><th>PCU/ hr</th></tr>
<tr><td>Shuttle Bus(1)</td><td>190</td><td>8</td><td>12</td><td>190</td><td>8</td><td>12</td></tr>
<tr><td>Car/Taxi(2)</td><td>6</td><td>2</td><td>2</td><td>6</td><td>2</td><td>2</td></tr>
<tr><td>Public Transport /Walk</td><td>4</td><td>-</td><td>-</td><td>10</td><td>-</td><td>-</td></tr>
<tr><td>Total</td><td>200</td><td>10</td><td>14</td><td>200</td><td>10</td><td>14</td></tr>
</table>

For the proposed columbarium, a two-way traffic of about 28 pcu trips and 8 pedestrians per hour will be induced on the weekdays of the grave-sweeping festival.

For the religious activities, based on the discussion in response to TD(E3), no additional vehicular traffic would be brought in to the vicinity while only 20 visitors per hour would arrive / leave the proposed site on the non-peak hour of Saturday and Sunday over non-grave-sweeping festival .

Therefore, the most critical case scenario has been assessed in the TIA, which is the scenario for columbarium use.</td></tr>
</table>

3.6 Responses to Comments from Landscape Unit, Planning Department

Date	Items	The Applicant's Responses
Comments on the Planning Statement received on 21.8.2019		
L(A1)	2. The Site is situated in an area of unsettled valleys landscape character, and is surrounded by woodlands and a religious institution to its south. Carpark and public housing estates are found to its further east and southeast. According to our site visit conduced on 2.8.2019, the Site is currently occupied by three 2-storey buildings on a hard-paved platform, with a small tree located outside the entrance gate within the Site. With reference to the planning statement, such buildings were built in the 1960s. Nevertheless, it is observed from the aerial photos taken in 2008 and 2009 that the existing trees and vegetation originally located around the building within the Site have been removed and replaced by extensive paving. Adverse impacts on the existing landscape resources and character has taken place.	The application site was previously occupied by three low-rise residential buildings and platform for a long time (see **Photo 1**) and than had been abandoned for more than 20 years. Due to the long abandonment of the site and no one took the responsibility to maintain the site, wild grass and shrubs have grown in the site (see **Photo 2**). The application site continuously became derelict until the ownership was transferred to Master Yuen Sin Kan and his followers with the intention to establish the first temple of Lang Yan Sing Gau in Hong Kong – TKLY. The Applicant had only cleared wild grass and shrubs in order to improve the hygiene of the site.  **Photo 1 - Aerial Photo of the Application Site in 1973**  **Photo 2: Site Photo was taken before 2008**

Date	Items	The Applicant's Responses
L(A2)	3. Approval of this rezoning application which involved vegetation clearance prior to obtaining planning permission is undesirable and may attract similar applications in the "GB" zone and thus undermining the intactness of the "GB" zone. Therefore, we have reservations on the application from the landscape planning perspective.	As mentioned above, the Applicant had only cleared wild grass and shrubs in order to improve the hygiene of the site. The present application is to seek planning permission from the Board to regularise the Pre-cut-off columbarium at the site in response to the latest requirement of PCO. This is different to those planning application for providing a new columbarium or increasing number of columbarium niches which should be defined as the "Post-cut-off Columbarium".
Comments on the F.I. (I) received on 8.1.2020		
L(B1)	2. Having reviewed the F.I., there is no supplementary information to address our concerns from landscape planning perspective, and our previous comments on the application dated 21.8.2019 are therefore still valid.	Supplementary information provided by our legal advisor as attached in **Appendix III** to address your concerns from landscape planning perspective.
Comments on the F.I. (II) received on 21.8.2020		
L(C1)	Having reviewed the submitted information, in view that the existing trees and vegetation within the site had been removed and replaced by concrete paving as observed from the aerial photos of 2008 and 2009, adverse impacts on the existing landscape resources and landscape character have taken place within the "GB" zone. Hence, we maintain reservations on the application from landscape planning perspective.	Please find attached the supplementary information provided by our legal advisor in response to your concerns from landscape planning perspective in **Appendix IV**.
Comments on the F.I. (III) received on 25.1.2021		
L(D1)	Please include the revised Landscape Plan mentioned in Appendix I for formal record.	Please find attached the revised Landscape Plan in **Appendix I**.

3.7 Responses to Comments from District Lands Office, Lands Department

Date	Items	The Applicant's Responses
Comments on the Planning Statement received on 23.8.2019		
DLO (A1)	4. Our comments and observations on the application that you can convey to the applicant are as follows: (a) The proposed columbarium development contravenes the existing lease conditions.	In order to comply with the land lease requirement of the columbarium licensing application, an application for land exchange/ lease modification will be submitted to the DLO/TM for approval after the current rezoning application and the subsequent s.16 planning application have been approved by the TPB.
DLO (A2)	(b) The area quoted by the Applicant (3,137m^2) is slightly larger than the total registered area of the concerned lots based on our available record. The applicant is required to clarify.	According to the available information from DLO/TM in the previous rezoning application (No. Y/TM/8), the total area of the subject lots is about 3,136.6m^2 which is relatively similar to the site area of about 3,137m^2 quoted in the present application. Nevertheless, subsequent to the approval of the current rezoning application and the subsequent s.16 planning application, the Applicant will engage a land consultant to undertake the boundary setting plan to provide the accurate site area calculation.
DLO (A3)	(c) In para. 6.5.1 and as shown on Figure 6-5 of the TIA (Appendix V) of the planning statement, the applicant has proposed to widen the local access road connecting the site and Hing Fu Street to provide a 1.5m wide footpath and two passing bays along the road (with without specifying the width of the carriageway). The road widening proposal affects other private lots adjoining the application site, the unnamed local access road, the adjoining Government land and the existing graves lying on the adjoining slope. It would involve extensive cutting into the Government land and slope adjoining the access road.	In order to improve the condition of the access road leading to the application site, it is proposed to widen the road to provide a 1.5m wide footpath and three passing bays along the road. A Geotechnical Planning Review Report covering the road improvement proposal has been conducted. It concludes that very minimal earthworks will be required to improve the existing local access road. No registered geotechnical features will be affected based on the proposed road improvement works.

Date	Items	The Applicant's Responses
DLO (A4)	(d) It is noted that the proposed road widening works are in close proximity of a few existing graves. The applicant should ensure that the proposed works would not affect the graves and handle at his own costs any enquires from the affected descendants in connection with the road works and associated slope works (if any) on the graves.	Noted and agreed.
DLO (A5)	(e) The Government does not guarantee any right-of-way to the application site. It is the applicant's sole responsibility to secure a right of access over adjoining private lots own by the others and to make their own arrangements for acquiring such right-of-way for themselves and their visitors. The applicant has provided a copy of Agreement of Access Road sighed by the applicant and the owner of Lots 1744 S.D ss.1 & 1744 S.D RP registered in the Land Registry at Appendix III of the planning statement. It stated that the right of access would continue automatically upon extension of its lease terms. However, the applicant is required to clarify how their right of access over Lots 1744 S.D ss.1 & 1744 S.D RP could be sustained if the lease term of these adjoining lots and that for their proposed columbarium development is different.	Please find attached the letter from legal advisor in response to your concern on the right-of-way (see **Appendix II**).
DLO (A6)	(f) If planning approval is given to the proposed development over the subject site, the applicant will need to apply to the LandsD for a lease modification/ land exchange for the above development proposal. I would advise that there is no guarantee that the application, if received by LandsD, will be approved and I reserve my comment on such. The application will be considered by LandsD acting in the capacity as the landlord at its sole discretion. In the event that if the	Noted and agreed.

Date	Items	The Applicant's Responses
	application is approved, it would be subject to such terms and conditions as the Government shall deem fit to do so, including, among others, charging the payment of premium and administrative fee as may be imposed by LandsD. The access road widening proposal which affects and involves Government land will be examined and considered in details during the lease modification/ land exchange application stage. There is no guarantee that the application, if received by LandsD, will be approved.	
DLO (A7)	(g) As stated in para. 4.3.2(c) of the planning statement, the proposed shuttle bus pick-up/ drop off point is situated at the lay-by near Siu Hong MTR Station (North), which may be within the West Rail Vesting Boundary. The Applicant my need to consult MTRC/ TD on the proposal.	The lay-by is a public facility for pick-up/drop off activities by the general public and it is identified that sufficient capacity would be available to cope with the proposed shuttle bus services.
DLO (A8)	(h) The applicant has proposed in the Landscape Assessment (Appendix IV) of the planning statement to fell 9 nos. of trees which are in conflict with the proposed road widening works and to plant 17 nos. of compensatory trees along the proposed widening road outside the application site and on the Government land/ in close proximity to CLP's existing 400kV overhead lines and pylon. The applicant is required to clarify which party is to be responsible for carrying out the tree planning and for maintaining the trees in future.	The Applicant will be responsible for the design and construction as well as the proposed tree planting for the road widening scheme up to the satisfaction of the relevant government departments. The widened access road could be handed over to the relevant government department for management and maintenance after satisfactory completion. Nevertheless, the Applicant is prepared to manage and maintain the widened access road if required.
DLO (A9)	(i) Notwithstanding the above, Government reserves the right to take any lease enforcement or land control action as may be considered appropriate should any breach of lease conditions or unauthorized occupation of Government land is detected.	Noted.

Date	Items	The Applicant's Responses
Comments on the F.I. (I) received on 14.1.2020		
DLO (B1)	3. Regarding the applicant's response to our comment sin para. 1.7 on p.21 to 24 of the F.I., I have the following comments: (i) For item DLO(A3), the proposed road widening works may require statutory gazettal procedures under the Roads (Works, Use and Compensation) Ordinance (Cap 370). Comments from Transport Department should be sought. In addition, the proposal should avoid encroachment onto private land and no works affecting Government land should be conducted unless prior written approval has been obtained. There is no guarantee that approval will be given for any works on Government land. We reserve our rights to make further comments at the detail design stage and also the rights to take any enforcement action against any unauthorized occupation or works on Government land.	Comments from TD and our responses are shown in this Consolidated Planning Report on Further Information.
DLO (B2)	(ii) For item DLO(A5), while the applicant has provided its comments vide their letter of 3.12.2019, I would advise that pursuant to Section 6 of New Territories Leases (extension) Ordinance (cap. 150), the term of a lease to which this Ordinance applies is extended until the expiry of 30.6.2047. There is however, no guarantee that the lease for the adjoining private lots can be extended beyond 30.6.2047 under the provision of Cap. 150. In case the lease term of the adjoining lots and that for the proposed columbarium development is different, the applicant should seek their own professional advice on the access arrangement and future renewal of columbarium licence (if originally granted), if applicable.	Noted.

Date	Items	The Applicant's Responses
Comments on the F.I. (II) received on 21.8.2020		
DLO (C1)	1. Regarding the applicant's response to our comments in para. 1.3 on pg. 13 of the F.I. (II), for item DLO(1), the applicant has responded that comments from TD and responses are shown in Section 1.1 of the F.I. (II). We noted that TD has advised in item TD(14) that the village road is managed by HAD and the applicant should seek comments from HAD. The applicant has provided the layout plan of the proposed road widening works in Annex D of Appendix I, however, the applicant has not advised whether comment from HAD had been obtained. As this is TD's comment, we shall defer to TD to advise you on the same. In addition to that, we shall defer to TD to advise whether or not the proposed road widening works require statutory gazettal procedures under the Roads (Works, Use and Compensation) Ordinance (Cap. 370).	Noted. No comments have been received from HAD so far during the planning application stage.
DLO (C2)	Our previous comments dated 23.8.2019 and 10.1.2020 including those concerning the proposed road widening works are still valid.	Noted.
Comments on the F.I. (III) received on 25.1.2021		
DLO (D1)	DLO/TM advises you to consult HAD and TD on the proposed road improvement/ works at the village road(s).	Noted. A letter with the revised proposed road improvement plan has been submitted to Home Affairs Department on 9.2.2021 (see **Appendix VII**). Comments from TD on the proposed road improvement plan have been received during the planning application stage.

3.8 Responses to Comments from Environmental Protection Department

Date	Items	The Applicant's Responses
Comments on the Planning Statement received on 3.10.2019		
EPD (A1)	3. According to the applicant, on-site joss paper burning is currently not allowed but if the applicant considers allowing this in the future, smokeless joss paper furnaces with dust control measures shall be installed and the applicant will follow the operation practice recommended in EPD's "Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places". Moreover, the application does not involve major building construction or demolition work. Given the above, we have no adverse comments from the air planning and waste management perspectives.	Noted.
EPD (A2)	4. However, the applicant did not take into account the wastewater arising from the air scrubbers of the smokeless joss paper furnace when calculating the wastewater generated by the proposed use. To assess the potential noise impact due to the proposed use, the applicant should also clarify if any outdoor ceremonies/activities will be involved. Please have our technical comments in the enclosure for follow-up action.	As mentioned in ***para. 2.5.2*** of the EA Report, on-site joss paper burning is currently not allowed. If the Applicant considers allowing this in the future, then smokeless joss paper furnaces with dust control measures shall be installed and the recommendations in EPD's *Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places* shall be followed. Nevertheless, the wastewater arising from the smokeless joss paper furnace, if provided in future, has been estimated in the revised SIA report. Please refer to the new ***paras. 3.1.6, 3.1.7, 3.2.5*** and ***4.1.5***, the new ***Figure 3.1***, the revised ***Table 3-2***, ***Appendix C*** and ***Appendix D*** of the revised SIA Report for details (see **Appendix XII**). As mentioned in ***para.3.3.11*** (*previously number* ***3.3.8***) of EA report, only small scale ceremonies would be allowed to be carried out inside building structure during non-festival periods upon request. No outdoor ceremonies/activities will be allowed within the site. Furthermore TKLY will only provide religious lecture once every

Date	Items	The Applicant's Responses
		Saturday and Sunday. Each lecture will not have more than 20 students and it will be carried out at the proposed open lawn and multi function plaza. In view of the religious activities are relatively quiet in nature, and the training areas are situated in a secluded location surrounded by the proposed trees, it would not generate adverse noise impact to the surrounding. Such arrangements will be updated in the EA report in the subsequent s.16 planning application.
EPD (A3)	5. In view that the applicant has not addressed our concerns from water quality and noise perspective, we could not lend our support to the application at this stage.	Please refer to our responses regarding noise and water quality issues below for details.
EPD (A4)	<u>Water Quality</u> S.4.3.7 of the EA – Please be advised that the proposed STS system should be designed and constructed by following the requirements of ProPECC PH5/93 and are duly certified by an Authorized Person (AP).	Noted and ***paras. 4.3.7*** and ***4.3.5*** of the EA Report has been amended accordingly (see **Appendix XI**).
EPD (A5)	Table 3-2 of the SIA – There is no estimate of the quantity of wastewater arising from the air scrubbers of the smokeless joss paper furnace mentioned in S.2.4.11 of the EA report. Please state the quantity of this wastewater and how the wastewater will be handled.	Please refer to our response in EPD(A2) above. In addition, new ***paras. 4.3.10*** to ***4.3.12*** and ***4.4.6*** as well as a new ***Figure 4-1*** have been added to the revised EA Report regarding the management of the wastewater arising from smokeless joss paper furnace, if provided in future (see **Appendix XI**).
EPD (A6)	<u>Noise Impact</u> 1. Referring to S.3.3.8 of the EA, the consultant should confirm that none of the following items would be conducted/ operated at the site in any occasion. i) any outdoor ceremonies / activities ii) any burners / furnaces	i) A copy of our letter in relation religious function at the application site was been submitted to the TPB on 31.3.2021 (see **Appendix VIII**). In view of the religious lectures are relatively quiet in nature, and the training areas are situated in a secluded location surrounded by the proposed trees, the small religious session with not more than 20 people during non-festival periods would not generate adverse noise impact to the surrounding. Such arrangements will be

Date	Items	The Applicant's Responses
		updated in the EA report under the subsequent s.16 planning application. ii) Regarding the comment on burners/furnaces: • As mentioned in ***para. 2.5.2*** of the EA Report, on-site joss paper burning is currently not allowed. • If the Applicant considers allowing this in the future, then smokeless joss paper furnaces with dust control measures shall be installed and the recommendations in EPD's *Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places* shall be followed. • Even if smokeless joss paper furnace will be provided in future, no adverse noise impact is anticipated. Please refer to the new ***paras. 3.3.8*** to ***3.3.10*** as well as the revised ***paras. 3.4.2*** and ***6.1.4*** of the EA Report for details (see **Appendix VI**). In addition, ***para. 3.3.7*** of the EA Report has been amended to clarify that the outdoor BS equipment include split-type air conditioners only while the other BS equipment such as water pumps are fully enclosed to avoid misunderstanding (see **Appendix XI**).
EPD (A7)	2. The number of trips adopted by the consultant in S.3.3.10 of the EA deviated significantly from the figures provided by the traffic consultant (Table 5-2 in TIA). The consultant should review and advise whether significant traffic noise impact would be anticipated at the NSRs in the vicinity. S.3.3.11 appears to be incorrectly phrased and should be revised.	Please refer to our updated responses to TD(D4) below in relation to the traffic noise impacts.

Date	Items	The Applicant's Responses
Comments on the F.I. (I) received on 10.1.2020		
EPD (B1)	The application site comprises 7 private lots namely. Lots Nos. 1744 S.A, S.B, S.C, S.F, S.G, and S.I. all in D.D.132. According to the available information provided, on-site joss paper burning is currently not allowed but if the applicant considers allowing this in the future, smokeless joss paper furnaces with dust control measures shall be installed and the applicant should follow the operation practice recommended in EPD's "*Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places"* to minimize any potential environmental nuisance.	Revised EA and SIA are attached in **Appendix XI** and **Appendix XII** respectively. Referring to our R-t-C provided previously in November 2019 as well as ***paras. 2.4.11*** and ***3.3.8*** of the EA Report, on-site joss paper burning is currently not allowed. If the Applicant will consider to have joss paper burning in the future, a smokeless joss paper furnace with high dust and smoke removal efficiency will be purchased, such as "Ching Yan" Eco-Furnace from the Hong Kong Productivity Council (HKPC) or other equipment no less efficient from an equivalent supplier. In addition, the good operation practice and administrative measures recommended in EPD's *Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places* shall be followed by the Applicant. It was already mentioned in ***para. 2.4.12*** of EA report that the Applicant will follow the operation practice as recommended in EPD's "*Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places*" to minimize any potential environmental nuisance. All relevant good operation practices and administrative measures for minimising potential adverse air quality impacts were listed in ***para. 2.4.12*** of the EA Report. Regarding potential noise impacts arising from the operation of the smokeless joss paper furnace (if required), relevant mitigation measures to minimise noise impacts were already mentioned in ***paras. 3.3.8*** and ***3.3.9*** of the EA Report.
EPD (B2)	However, the applicant omitted the temple which is located adjacent to the concerned site within 20m from the site boundary. To assess the potential noise impact due to the proposed use, the applicant should also clarify if any outdoor ceremonies/activities	Please note that it was mentioned in ***para. 3.3.11*** of the EA report that only small scale of religious ceremonies/activities would be allowed to be carried out inside building structure during non-festival periods upon request. The religious lecture is small class

Date	Items	The Applicant's Responses
	will be involved. Please have our technical comments in **Annex A** for your follow-up action.	and relatively quiet in nature. Hence, no adverse noise impact on the nearby NSRs is anticipated. For other details, please refer to our further responses to your comments in Annex A below.
EPD (B3)	In view that the applicant is required to submit further information to address our above environmental concerns, we **could not lead our support** to the application from environmental perspective at this stage.	Please refer to our responses and the Further information for details.
EPD (B4)	Noise 1. It appears that the consultant has omitted the temple which is a located adjacent to the concerned site within 20m from the site boundary. The consultant should check and identify the Noise Sensitive Receivers (NSRs) in the vicinity thoroughly.	It is believed the mentioned "temple" should be the private columbarium named "光孝仙苑" to the west of the application site. Please note that "光孝仙苑" is not a NSR because: i) According to the Applicant, "光孝仙苑" is a private columbarium and it is not a temple. ii) Based on our observation on 22 June 2018, "光孝仙苑" was locked, i.e., not open to the public. As per Annex 13 of the Technical Memorandum (TM) of EIAO, Appendix 4.1 of Chapter 9 Environmental of HKPSG and the TMs of NCO, 光孝仙苑 should not be considered as a place of public worship even if it is a temple.
EPD (B5)	2. If the said temple is confirmed as NSR, since it is locate near the site and that furnace could be operated in future, the consultant should confirm whether noise mitigation measures would be implemented to the extent that no parts of the noise sources would be visible from the NSR. Otherwise, the consultant should conduct quantitative assessment to determine the max permissible should power level in consideration of any noise mitigation measures to be implemented.	Please refer to our response above and the said "temple" or more correctly, a private columbarium, is not a NSR.

Date	Items	The Applicant's Responses
EPD (B6)	Sewerage 3. According to the Sewerage Impact Assessment (SIA) Report S.3.1.3 & S3.1.4, it is noted from the EA report that the septic tank and soakaway system (STS system) will be adopted for on-site wastewater treatment. Therefore, not all wastewater will be tinkered away. Please revise these paraphrase. Indication of the STS system in a figure is preferred.	***Para. 3.1.3*** of the SIA Report has been revised as follows: "*All wastewater generated from the Site by the visitors will be tankered away during Festival Periods, while those generated from the Site by both staff and visitors during Non-festival Periods will be discharged into the existing septic tank/soakaway system. The locations of the existing septic tank/soakaway system are indicated in* ***Figure 3.1***."
EPD (B7)	4. It is also noted that portable toilets will be provided during festival periods to address an anticipated increase in quantity of sewage. Please be reminded that the discharge licence will be made.	Noted with thanks.
EPD (B8)	5. In SIA Report S.3.1.4 #3 – Please clarify the volume of flushing water (IL) to be consumed by one flush of chemical toilet. According to Catalogues of Chemical Toilets in Appendix A, water consumption rate is IL/s while flushing time is 5 seconds.	The supplier of the vacuum toilet "Jets ™ 50M Toilet has clarified that the catalogue appended to the SIA Report showing 1L/s with a flushing time of 5 seconds is not correct. Instead, the Supplier confirmed via email on 17 January 2020, "*the vacuum toilet water consumption per flush is approx. 1 – 1.2 ltr*". Please refer to the updated catalogue showing the water consumption of 1.2 litres in ***Appendix A*** of the revised SIA Report for details. Please refer to ***paras. 3.1.4*** to ***3.2.5***, ***Appendix A*** and ***Appendix C*** of the revised SIA Report for details.
EPD (B9)	6. In SIA Report S.3.1.4 #5(C) – "Sewerage should read "Sewage". Please also amend the related parts in this report.	Noted, para. 3.1.4 #5(C) has been revised accordingly.

Date	Items	The Applicant's Responses
Comments on the F.I. (II) received on 24.9.2020		
EPD (C1)	The application site comprises 7 private lots namely Lots Nos. 1744 S.A, S.B, S.C, S.F, S.G, S.H. and S.I all in D.D.132, Tuen Mun. The applicant seeks planning permission for amendment to the OZP to rezone the Site (approx.. 3,137 m^2) from "GB" to "G/IC" on the OZP to facilitate a religious institution with columbarium use. Total of 11,094 niches will be provided on this application site.	Noted.
EPD (C2)	If the applicant considers to have joss paper burning, a smokeless joss paper furnace with high dust and smoke removal efficiency will have to be installed to minimize any potential environmental nuisance. The applicant is reminded strictly to observe the "*Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places*" if eco-furnace will be installed.	The requirements of the guideline were included in ***para.2.4.12*** of the EA report as attached in **Appendix XI**, in which will be strictly followed by the applicant if joss paper burning is allowed in the future. Please refer to ***para. 2.4.12*** for details. More details including the tentative operation hours of the smokeless joss paper furnace and its indicative locations have been added in ***para. 2.4.11*** and ***Figure 2-2***, respectively in case it is provided in the future.
EPD (C3)	Our comments on the planning statement from water and sewage perspective can be found in Annex A for your follow-up action.	Noted. Please refer to our responses in Annex A.
EPD (C4)	In view that the applicant is required to submit further information to address our above environmental concerns, in particular the air quality aspect, we could not lead our support to the application from environmental perspective at this stage.	Noted. Please refer to our responses in EPD(C2) above.
EPD (C5)	EPD(B9) - S 2.3.1 - As there is no sewerage system in the vicinity, there should be no sewerage impact. Please amend and check again in the relevant part in this report.	Noted, the term "sewerage" has been amended to "sewage" in ***para. 2.3.1*** of SIA report as attached in **Appendix XII** and in others relevant parts in EA and SIA reports.
EPD (C6)	S 4.4.5 - The applicant is advised to follow the good practices stated under ProPECC 5/93 when designing on-site drainage system to convey surface runoff, particularly the covered area, car parking area, access road.	Relevant descriptions have been added in ***para. 4.4.5*** of EA report regarding good practices stated in ProPECC 5/93.

Date	Items	The Applicant's Responses
EPD (C7)	S.1.3.1 - If pesticide or fertilizer will be applied within the landscape area, please note the manufacturer's recommend application dosage. Agrochemical application should be avoided before heavy rain in order to protect water quality of the watercourse(s) nearby.	Noted, relevant descriptions to prevent overdose of pesticide or fertiliser applied on landscape area and the avoidance of agrochemical application have been added in ***para. 4.3.13*** of EA report. Please refer to this paragraph for details.
EPD (C8)	S.3.2.4 – If the above ground sewage holding tank will be kept on-site permanently, please implement adequate mitigation measures to avoid leakage. The applicant should also consider the licensed collector's accessibility to the location of sewage holding tank.	Mitigation measures to avoid leakage from wastewater holding tank and relevant descriptions regarding the licensed collector's accessibility to the sewage holding tank have been added in ***para. 4.3.12***, please refer to this paragraph for details.
Comments on the F.I. (III) received on 25.1.2021		
EPD (D1)	3. We noted that the applicant is considering to have joss paper burning, a smokeless joss paper furnace with high dust and smoke removal efficiency will have to be installed to minimize any potential environmental nuisance. The applicant will have to be installed to minimize any potential environmental nuisance. The applicant will strictly to follow the *"Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places"* if eco-furnace will be installed.	Noted.
EPD (D2)	4. We also noted that the applicant has proposed closing the columbarium during the Ching Ming and Chung Yeung Festival Days and one weekend before and after that. The operating hours of TKLY do not tally between the EA report and TIA. The consultant should review and revise the operating hours of the proposed columbarium.	In order to address the concern on traffic impact, it was proposed to close the columbarium on Ching Ming and Chung Yeung Festival Days, as well as weekends (i.e. Saturday and Sunday) of two weeks before and after the Festival Days. The relevant paragraphs of both EA and SIA Reports have therefore been updated which is now consistent with that in the TIA report.
EPD (D3)	5. Our comments on the planning statement from noise and water perspective can be found in Annex A for your follow-up action.	Noted.

Date	Items	The Applicant's Responses
	6. In view that the applicant is required to submit further information to address our above environmental concerns, in particular the noise aspect, we could not lead our support to the application from environmental perspective at this stage.	No insurmountable environmental concern is found for the change to transport arrangement. Please refer to the responses below and the revised paragraphs of the EA (see **Appendix XI**) and SIA (see **Appendix XII**) Reports for details.
EPD (D4)	<u>Noise</u> 1. We note that the applicant has proposed closing the columbarium during the Ching Ming and Chung Yeung Festival Days and one weekend before and after that. The consultant should review and clarify whether the induced traffic as claimed in S.3.3.13 of the EA report is still adequate under such arrangement. If similar amount of induced traffic is expected during the weekdays when the nearby school (i.e. Po Leung Kuk East Horizon Primary School) is in operation, the consultant should provide further justifications, e.g. quantitative assessment, to confirm that no significant contribution will be caused by the generated traffic, in particular for the said primary school which is subject to a more stringent criteria, i.e. 65 dB(A), according to the HKPSG.	Please note that in the previously submitted TIA Report, it was assumed that all the visitors would go to the proposed columbarium within one day, i.e., either Ching Ming Festival or Chung Yeung Festival. Because of the concern about considerable traffic impact on the roads, it was then proposed to close the columbarium on Ching Ming and Chung Yeung Festival Days, as well as one weekend (i.e. Saturday and Sunday) before and after the Festival Days in the F.I. submission in December 2020. And it is now further decided by the Applicant to revise the operation days, in which the columbarium will be closed on Ching Ming and Chung Yeung Festival Days, as well as weekends (i.e. Saturday and Sunday) of two weeks before and after the Festival Days. Therefore, visitors will go to the proposed columbarium on nineteen weekdays rather than five days (one festival days + four days of two weekends). For a conservative approach, it was assumed all visitors would still go to the proposed columbarium on weekdays of two weekends in the TIA Report to be revised. Although the traffic arrangement has been changed for alleviating traffic impact, it is still correct that increase in traffic noise impact on the NSRs will not be significant, except NSR1 to NSR3 (i.e. Po Leung Kuk East Horizon Primary School) on Hing Fu Street. Therefore, the traffic noise levels at NSR1 to NSR3 have been estimated and the L10(1-hour) levels are found to comply with the HKPSG's criteria.

Date	Items	The Applicant's Responses
		Please refer to the revised paras. 3.3.13 to 3.3.15 and a new Table 3-4 of the revised EA Report for details. The Applicant has committed that traffic noise impact will be further assessed during the s.16 planning application to ascertain no unacceptable traffic noise impact will be resulted, if this s.12A rezoning application will be agreed.
EPD (D5)	2. In addition, the consultant should address the following comments: - S.1.3.5 and S.3.3.6 - The operating hours of Tin Kwong Lun Yee do not tally between these sections. Please review and revise. - The consultant should confirm that all noise sensitive uses, e.g. offices and places of worship, will not rely on open window/door for ventilation. Otherwise, the consultant should address the potential noise impact, if any, on the noise sensitive uses at the proposed development.	Noted, the operation days and hours of the proposed development have been revised accordingly in ***paras.1.3.5*** and ***3.3.6***. It has been advised by the Applicant that all on-site noise sensitive uses including offices and places of worship will not rely on open window/door for ventilation. Therefore, the potential noise impacts generated by off-site noise sources on the on-site noise sensitive uses of the proposed development could be negligible.
EPD (D6)	3. Lastly, we would like to remind the applicant/consultant that there is no guarantee that the Noise Assessment Report as stated in S.3.3.9, if any, will be approved by the PCLB or the relevant authority, despite any description made in this EA report. The applicant/consultant should review and provide an update of the contemporary conditions/situations of adjoining land uses and ensure the necessary mitigation measures would be provided during the stage of the Noise Assessment Report. Nothing in this report shall bind the PCLB or any relevant authority in making a decision.	Noted.

Date	Items	The Applicant's Responses
EPD (D7)	Water 4. R-t-C item EPD(C6) S 4.4.5 5th line: Revision of the incomplete sentence "The location of the wastewater storage tank." is required.	Noted, the sentence has been revised as "The location of the wastewater storage tank is shown on ***Figure 4-1***". Please refer to the revised paragraphs of S.4.4.5 for reference.
EPD (D8)	5. App. C Section 2. Sewage generated by visitors – Please check if the expression of Total ADWF for Volunteer and Visitor is d x e x f instead of e x f x g. If it is supposed to estimate the ADWF for Volunteer and visitors, kindly consider to revise the title to "Sewage generated by volunteers and visitors".	Please note that there are typos. Since there are revised of the calculation and the remarks should be referred to b x c +d x e x f now, which has been amended accordingly. Please note there will be no volunteer and the calculation of sewage generation in this part only involved those from visitors and staff only. Therefore, the title of the Appendix C Section 1B.(i) (previously Section 2) has been revised to "Sewage to be handled by container/chemical toilets", which referred to sewage generated by staff (i.e. security guards) and management staff.
EPD (D9)	6. App. C Section 2A. Container toilet installed with vacuum toilets - Referring to S 3.2.3 (b)(ii), flush volume is about 1.2L, which is larger than 1L stating in this section. Please clarify. Besides, what does the equation - (g/h) x 4,000 L/m^3 represent?	Noted, 1.2L is correct and the remarks in Option 1 of Section 1B (previously Section 2A) has been amended to 1.2L accordingly. There was typo and the remarks has been revised to "(g/h) x 1,000 L/m^3", which is the equation to estimate the number of tanks required for storing the sewage from container toilet. Please note g and h are values representing "Sewage generated by visitors" (as mentioned in item 5 above) and "Storage Capacity of Portable (Container Toilet)", respectively.

3.9 Responses to Comments from Geotechnical Engineering Office, Civil Engineer and Development Department

Date	Items	The Applicant's Responses
Comments on the Planning Statement received on 3.10.2019		
GEO (A1)	2. Please be advised that there are registered man-made features which could affect or be affected by any proposed development in the site. In addition, the site is overlooked by steep natural terrain and meets the Alert Criteria for a Natural Terrain Hazard Study. 3. In view of the above, the applicant is required to submit a Geotechnical Planning Review Report (GPRR) to support the application pursuant to Annex B of the Guidance Notes of the Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131). The requirements for a GPRR are given in the attached GEO Advice Note.	Noted. Please find attached GPRR in **Appendix XIII** for your perusal.
Comments on the F.I. (I) received on 8.1.2020		
GEO (B1)	3. Regarding the GPRR (Appendix VIII), our comments are as follows: i. Section 2.2.1 - The referred Geological Map Sheet (Edition I) is published in 1988 instead of 2013. Please correct the typographical error.	Noted and revised.
GEO (B2)	ii. Section 2.2.4 - Please include an assessment of how the natural terrain may affect, or be affected by, the proposed development, and advise whether a Natural Terrain Hazard Study is needed and whether suitable mitigation measures should be provided, if found necessary.	A slope stability assessment will be carried out for the 10m extent of the natural terrain from the crest of the Feature 5NE-D/C2. Mitigation measures will be provided if found necessary in the stability assessment. (refer to Section 2.2.3 in the Consolidated GPRR attached in **Appendix XIII**.
GEO (B3)	iii. Sections 2.2.4 and 2.2.5 - The existing feature no. "5NW-D/C2" should read "5NE-D/C2".	Noted and revised.
GEO (B4)	iv. Section 3.1 - Please consider whether the referred feature no. "7SW-B/F1" is a typographical error, and therefore should read "5NE-D/F1".	Noted and revised.

Date	Items	The Applicant's Responses
GEO (B5)	v. Section 3.2 - Please indicate the extent of the existing non-registered cut slope on the site location plan and provide Section 2-2 and Section 3-3 for our reference. In addition, please enclose the latest survey plan in the appendix.	The Section 2-2 and Section 3-3 were shown in Dwg No. HPL933E/TS/01 and HPL933E/S/01 in Appendix F. The latest survey plan (Dwg. No. HPL933E/TS/01) was carried out by Helen Chan Professional Land Survey Ltd in November 2005.
Comments on the F.I. (II) received on 21.8.2020		
GEO (C1)	R-to-C item GEO(B1) - The applicant's responses are noted. The applicant should update Section 2.2.1 of the GPRR accordingly.	Noted. The updated GPRR is attached in **Appendix XIII**.
GEO (C2)	R-to-C item GEO(B2) - The applicant has not adequately addressed our comments in relation to the natural terrain hazard issues. Please advise the applicant and his consultants that they should refer to GEO Report no. 138 (2nd Edition) for technical guidance of natural terrain hazard study (NTHS). Justifications on the proposed extent of NTHS area (i.e. 10m extent from the crest of man-made feature no. 5NE-D/C2) should be provided. The proposed NTHS area should be revised to include an adequate extent as appropriate. Please ask the applicant to review and revise the GPRR to address our comments accordingly.	Noted. An Extent of Study Area is now proposed.
GEO (C3)	R-to-C item GEO(B4) - Section 3.1 of the GPRR. The features nos. "5NE-D/C1" should read "5NE-D/C2" and "5NE-B/F1" should read "5NE-D/F1". The applicant should update Section 3.1 of the GPRR accordingly.	Noted and revised.
GEO (C4)	R-to-C item GEO(B5) - Section 3.2 of the GPRR. It is noted that the survey plan attached in Appendix F was dated November 2005 and the boundary of feature no. 5NE-D/C2 was modified in 2006. The applicant and his consultants should clarify the location of the non-registered existing cut slope mentioned in Section 3.2 with respect to the boundary of feature no. 5NE-D/C2. In addition, the extent of the non-registered cut slope should be clearly indicated on the	Noted and revised.

Date	Items	The Applicant's Responses
	survey plan and sections accordingly. The descriptions in Section 3.2 of the GPRR should be reviewed and revised as necessary.	
GEO (C5)	Section 2.2.6 of GPRR - the applicant and his consultants should note that only the sub-division 1 of feature no. 5NE-D/C2 was upgraded under LPM project. Section 2.2.6 should be revised accordingly.	Noted and revised.
Comments on the F.I. (III) received on 25.1.2021		
GEO (D1)	Please note GEO, CEDD has no further comment on the revised GPRR. GEO, CEDD has requested you to provide replacement pages direct. As such, please submit those replacement pages to TPB for formal record.	The replacement pages have been incorporated in the Consolidated GPRR (see **Appendix XIII**).
Comments on the F.I. (IV) received on 25.3.2021		
GEO (E1)	It is noted that the applicant has proposed to widen the existing access road between the roundabout of Hing Fu Street and the application site. Please request the applicant to submit an updated GPRR to include a review of how the retaining walls and/or slopes, including natural terrain, shown on the plan (after the road widening) may affect, or be affected by, the proposed development and in relation to this, an assessment of the geotechnical feasibility of the proposed development, and an outline of any further study that may be required.	An additional assessment on the access road improvement works has been conducted. It concludes that very minimal earthworks will be required to improve the existing local access road. No registered geotechnical features will be affected based on the proposed road improvement works. The additional assessment has been incorporated in the Consolidated GPRR.
Comments on the F.I. (V) received on 23.4.2021		
GEO (F1)	His office received the revised pages of GPRR with further amendments from the applicant's representative, Mr. Henry CHAN, under his email dated 12.4.2021 direct. These revised pages supersede those in the GPRR attached in the submission on 31.3.2021. It is noted that an assessment of the geotechnical feasibility of the proposed access road improvement works has been included in the revised GPRR. His office has no comment on the further information for the captioned s.12A application.	The replacement pages of the GPRR, which were submitted to the TPB on 30.4.2021 for formal record, have been incorporated in the Consolidated GPRR as attached in **Appendix XIII**.

3.10 Responses to Comments from Hong Kong Police Force

Date	Items	The Applicant's Responses
Comments on the Planning Statement received on 24.9.2020		
HKPF (A1)	In the application, the applicant emphasized that their booking system would effectively limit the number of visitors. However, police have reservation on practicality and effectiveness of this measure. Especially, during the peak hour on the festive periods, some visitors may not follow the general management measure to visit the columbarium. It is also noted that narrow path connecting to Hing Fu Street is the only access to the columbarium. The path is narrow and steep and serves with two-way traffic. Pedestrian is required to share the same narrow path with vehicles. It creates a safety concern if there is no proper traffic management to separate pedestrian and vehicles.	The relevant government departments have no specific comments on the feasibility and effectiveness on the proposed administrative measures and the visit-by-appointment system proposed by the Applicant. In fact, similar administrative measures and visiting arrangements were proposed by other columbaria in their applications, which were accepted by the TPB and the PCLB. According to RNTPC Paper No. Y/TP/29 for a columbarium at Tai Po, which is similar in terms of operation and number of niches as TKLY, comments from the commissioner of Transport are summarized as follows:- *"understanding that PCAO has confirmed to take up enforcement for the 'pre-booking system' arrangement under the Management Plan to be submitted to the Licensing Board, he has no in-principle objection to the application from traffic engineering point of view subject to the followings:* *(i) implementation of the proposed pavement widening;* *(ii) implementation of the crowd management measures as detailed in the TIA report; and* *(iii) the land authority shall give the applicant the exclusive right for usage of the proposed waiting areas for visitors falling within government land.* *Since the PCAO will be responsible for monitoring the implementation of the management plan, the above crowd management measures should be included in the Management Plan for the Licensing Board's approval."* In relation to the access road between Hing Fu Street and TKLY, please be advised that

Date	Items	The Applicant's Responses
		a road improvement plan has been proposed by the Applicant to provide additional passing bays and 1.5m footpath. Such arrangement will address the traffic safety concern due to the proper traffic management and separation between pedestrian and vehicles.
HKPF (A2)	On the issue of no parking facilities, it may cause possible illegal parking problem. Due to absence of parking space, the visiting vehicles may require to drive around at or wait on the roads at the vicinity in order to look for parking spaces. It would probably worsen the situation. In addition, another columbarium operator (Kwong Hau Sin Yuen, "KHSY") in nearby area suggests to close the ramp for traffic during festive periods. It will affect the applicant's suggesting to provide shuttle bus services. In view of the conflict between two operators, it is suggested that the applicant should coordinate with "KHSY" to work out a traffic plan for police further comments.	Similar to great majority of cemeteries and/ or columbaria in Hong Kong, there is no on-site car parking facilities to be provided within the site for visitors during grave sweepings festival periods. Private car drivers have to park their cars at carparks in the vicinity, i.e Po Tin Shopping Centre. All visitors are well aware of this arrangement. In severe illegal parking situation on Hing Fu Street during Ching Ming and Chung Yeung Festivals, as a general practice, the Applicant will inform Police to exercise towing action to ensure that the street concerned is wide and safe enough for the traveling of shuttle bus provided by TKLY and the traveling of PCs and Taxis. In any case, in the process of contacting the respective niche purchasers two months in advance for arranging the visit-by-appointment, the management of the TKLY will strongly remind the niche purchasers that no parking facilities will be provided by the TKLY. The niche purchasers will also be reminded not to park their cars along Hing Fu Street. If they drive, they are advised to park their cars at nearby carparks. On the spot, staff and security guards will be deployed outside the main entrance of the TKLY to monitor the situation.
HKPF (A3)	In view of above, police show concerns on the pedestrian and traffic arrangement during the peak hour on Ching Ming Festival and Chung Yeung Festival, as there are already another columbaria in the area which share the same access in Hing Fu Street Road. It	To reduce the traffic impact to the vicinity, the columbarium will be closed during Ching Ming and Chung Yeung Festival Days and the two Saturdays and Sundays before and after the festival days. Apart from that, visit-by-appointment system will be strictly

Date	Items	The Applicant's Responses
	is believed that it would probably pose potential traffic impact on the surrounding network, especially during the festival days.	implemented to control the number of visitors entering the columbarium. Therefore, the amount of traffic to be induced by the proposed development would not pose adverse traffic impacts to the road network in the vicinity of the application site.
Comments on the F.I. (III) received on 25.1.2021		
HKPF (B1)	HKPF has no further comment.	Noted.

4. PUBLIC CONSULTATION

On 26.7.2019, 20.12.2019, 14.8.2020, 15.1.2021, 26.2.2021 and 9.4.2021, the application and a set of F.I. submitted by the Applicant were published for public inspection. During the statutory public inspection periods, a total of 456 public comments were received, of which **438 supported the application**, 7 persons raised concerns and the remaining 11 raised concerns to the application. A brief summary of the public comments are as follows:-

Publication Period	Supporting	No Comment	Raised Concerns	Opposing	Total
26.7.2019 – 16.8.2019	23	0	0	1	24
20.12.2019 – 10.1.2020	12	0	2	3	17
14.8.2020 – 4.9.2020	53	0	1	1	55
15.1.2021 – 5.2.2021	78	0	1	1	80
26.2.2021 – 19.3.2021	151	0	0	0	151
9.4.2021 – 30.4.2021	121	0	3	5	129
Total	**438**	**0**	**7**	**11**	**456**

4.1 Supporting Public Comments

The 438 supporting comments were mainly from local residents and followers. Their views are summarized as follows:-

(a) *Comply with Private Columbaria Ordinance*
TKLY had submitted both Columbarium Licence and TSOL to the PCLB. The current planning application is submitted to comply with the town planning requirements in obtaining a license.

(b) *The Proposed Use is Compatible with the Surrounding Land Use*
TKLY is located in a serene place, with many trees and slope surrounding the site acting as barrier. It is also located at a certain distance between residential areas. Moreover, the application site is located on a platform and adjoining other columbaria and graves. Therefore, religious and columbarium uses within TKLY are compatible with the surrounding area with rural land use character.

(c) *Would not Cause Adverse Traffic Impact*
TKLY will provide sufficient transport facilities and barrier free access facilities, which allows visitors to easily access to a religious institution. They have a road improvement proposal along Hing Fu Street and proposed additional tree planting. In order to further address traffic impact of the proposed development, TKLY has decided to close the site during Ching Ming and Chung Yeung Festival Days and the two Saturdays and two Sundays before and after the festival days.

(d) *Would not Cause Nuisance to the Locality*

TKLY will implement a management plan in order to arrange crowd control during Festival Periods effectively so as to minimize the affect to residents within the vicinity. The Applicant has provided Further Information(s) to address departmental concerns on precedent effect.

(e) *Will not Cause Environmental Impact*

TKLY will not provide furnace and allow joss paper burning within the site. Thus, the proposed development will not cause any adverse air quality impact.

The Applicant's responses

The Applicant appreciates the strong support from the public. Indeed, burial arrangement is a necessary element to allow family, relatives and friends pay respect to their ancestors and loved ones, which is an important matter for both the departed and the living. The wish of deceased to have their cremated ashes to be properly placed should be respected. TKLY will deploy an experience management team to ensure proper operation of the site so as to minimise any potential impact arising from the religious and columbarium use.

4.2 Responses to Major Public Concerns

The 11 objection comments and 7 commenters who raised concerns on the application were mainly related to land use compatibility, traffic impact and undesirable precedent. Their concerns have been summarized and detailed responses are as follows:-

Major Concerns:

1. *Land Use Compatibility*
   The proposed area is zoned as "GB". The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets.

2. *Traffic Impacts*
   The approval may bring adverse traffic impact to the surrounding area, especially during the Ching Ming and Chung Yeung Festivals.

3. *No Urgency to Provide Private Columbarium*
   Most of the columbaria in the area are privately-operated with niche prices not affordable by locals. The proposed columbarium will only benefit the operators rather than the public. There is a government columbarium located at Tsang Tsui, Tuen Mun. Therefore, there is no need to provide additional private columbarium in the area. Approval of the application would set an undesirable precedent for other similar applications within the "GB" zone.

The Applicant's responses:

1. *Planning Consideration*
   Although the application site is zoned "GB" and is situated at the north-western fringe of Tuen Mun New Town, it has a long history of sub-urban character as it was previously occupied by several domestic houses under building licences surrounded by access roads since 1960s. The aerial photo in 1973 as indicated in the Planning Statement shows that the site was covered by a large platform with three buildings, vehicular access road, garden and shrubs. When the statutory planning control came into force in 1983, the Board took a comprehensive approach to zone the site and it's surrounding to "GB".

   However, the application site has not functioned as a "GB" since then. The proposed rezoning will result in efficient use of the land and enable the Applicant to improve the existing environment to meet various needs of the community. It will help preserving and protecting the landscape quality of the "GB" zone.

2. *Traffic Consideration*
   To reduce the traffic impact to the vicinity, the columbarium will be closed during Ching Ming and Chung Yeung Festival Days and the two Saturdays and two Sundays before and after the festival days. Apart from that, visit-by-appointment system and crowd management plan will be implemented to control the number

of visitors entering the columbarium. Therefore, the amount of traffic to be induced by the proposed development would not pose adverse traffic impacts to the road network in the vicinity of the application site.

Security/ management staff for both within the columbarium and at the layby in Siu Hong MTR Station will be deployed. The management staff/ security guards to be stationed within the site will assist members to undertake the worship activities in a safe and orderly manner.

3. Columbarium as an essential social facility

As stated in the Land Use Assessment on Precedent Cases in Tuen Mun Area in Section 5.11 of the Planning Statement, given the unique background of TKLY, only 4 similar Pre-cut-off Columbarium cases could be found in Tuen Mun, including Saint Temple, Tsing Wan Kun, 覺塵禪寺 and Tsing Shan Monastery. Saint Temple had already obtained the planning approval on 28.7.2017. Tsing Wan Kun, 覺塵禪寺 and Tsing Shan Monastery are located within Tsing Shan Tsuen which is far away from TKLY and has a totally different traffic network and pedestrian access arrangement to the Kwong Shan Tsuen area.

Columbarium is a public gain since there is a high demand for niches by the public. It is welcomed that the columbarium in Tsang Tsui with 160,000 niches will meet some of the demand for niche spaces (about three years demand). On the other hand, Food and Health Bureau (FHB) acknowledged the importance of existing private columbaria. TKLY is suitable for columbarium use in view of its location and good accessibility. Therefore, it is not an undesirable use.

4.3 Concluding Remarks on Public Consultation

In general, any project related to columbarium would receive public objection. It is difficult to convince all members of public to agree that a columbarium would not have adverse impact on the surrounding area even with sufficient technical assessments provided. Nevertheless, the overwhelming supports received illustrates that some members of public notice the urgent requirement for columbarium niches. The Applicant has actively proposed different measures to reduce various possible traffic and environmental impacts to the vicinity.

Burial arrangement is a necessary element to allow family, relatives and friends to pay respect to their ancestors and loved ones, which is an important matter for both the departed and the living. The Government had openly emphasized the importance of dispelling the misconception harboured by the public that graveyards and columbaria are evil and offensive. The Applicant has the true intention to comply with all the statutory requirements to regularise the existing uses at the site. We should respect the wish of deceased to have their cremated ashes to be properly placed.

5. CONCLUSION

5.1 The Application is Desirable and Well Justified

As recommended by PlanD, a Consolidated Planning Report on Further Information is prepared by the Applicant to consolidate all the previous submissions in the form of Further Information submitted since 4.12.2019. It comprises all the updated plans and technical assessments for the development proposal, as well as the detailed responses to public and departmental comments. Planning assessment on the development proposal has indicated that it is well justified based on the following considerations:-

(a) Comply with Policy Objective

This planning application is aimed at regularising the Pre-cut-off Columbarium in TKLY and the number of niches involves those as recorded on 30.6.2017 (i.e. the enactment date of PCO). It is in line with the spirit and requirements of the PCO to properly resolve the historical problem of the Pre-cut-off Columbaria in order to minimise any social concern arising from people who have purchased these niches and massive displacement of interred ashes before the introduction of regulatory policies.

(b) Meeting the Shortfall of Columbarium Niches & Promote Religious Services

There is a growing demand for columbarium facilities within an ageing population in Hong Kong. The proposed development at this suitable location can increase the supply of niches to meet the urgent public demand. FHB also acknowledges the importance of private columbaria in the three-pronged strategy for handling human ashes under the PCO.

Approval of this planning application will allow the remaining niches in TKLY could be put up for sale in order to meet the future need for their members and to improve the financial situation in promoting religious services.

(c) Site Suitability and Land Use Compatibility

The application site is suitable for columbarium use because it can be conveniently reached by public transport facilities and access road. It is well segregated from domestic uses which a reasonable distance by level difference and slope with mature trees. The existing buildings at the site are low-rise and low-density in nature which is compatible within surrounding rural land use character. The proposed development unlikely results in significant visual impact to the surroundings.

(d) No Adverse Technical Problem

Detailed assessments have been conducted to investigate the traffic, sewerage, environmental, landscape, visual and geotechnical impacts of the proposed development. All concludes that there would be no insurmountable problems

caused by the existing columbarium taken into account the mitigation and improvement measures proposed. Majority of the government departments had no objection/ further comment to the applications.

(e) Not an Undesirable Precedent

Considering the character and unique locational advantage of the site, as well as the submission of comprehensive assessments and designs, the approval of the rezoning proposal will not set an undesirable precedent for the other similar application. Approval of this planning application will allow the remaining niches in TKLY could be put up for sale in order to meet the future local demand and to improve the financial situation in promoting religious services.

Moreover, it is important to note that the columbarium in TKLY is a Pre-cut-off Columbarium (a columbarium that was in operation, and in which ashes were interred in niches, immediately before the cut-off time, i.e. 8:00 a.m. on 18.6.2014). Thus, it is totally different to those planning application for increasing number of columbarium niches or providing a new columbarium which should be defined as the "Post-cut-off Columbarium". Nevertheless, similar new applications for columbarium would require technical assessments to be carried out to demonstrate that no adverse impacts will be resulted as a consequence. Therefore, approval of this application will not result in a cumulative effect of approving similar applications.

(f) Public Comments have been Addressed in Detail

The concerns of the public on the subject application have been adequately addressed in the Applicant's submissions. Comments from the public have also been duly taken into account and appropriate mitigation measures have been proposed accordingly to minimize any potential impacts. The Applicant is willing to further liaise with the locals and the general public to address their concerns.

5.2 Recommendations

The Applicant, after carrying out detailed design, planning, technical assessments and detailed public responses in the past years, is confident that, the concerns of the relevant government departments and the Board have been adequately addressed. The Applicant is willing to accept the imposition of any appropriate approval conditions by the Board under the subsequent s.16 planning application.

It is considered that the present application provides an extremely rare and unique opportunity to properly resolve the historical problem of the Pre-cut-off Columbaria in order to minimise any social concern arising from people who have purchased these niches and massive displacement of interred ashes before the introduction of regulatory policies. In light of the public gains of the proposed scheme and the insignificant potential impacts envisaged, the planning application is now recommendable for the consideration and approval of the Town Planning Board.

Appendix I: Revised Architectural and Landscape Drawings

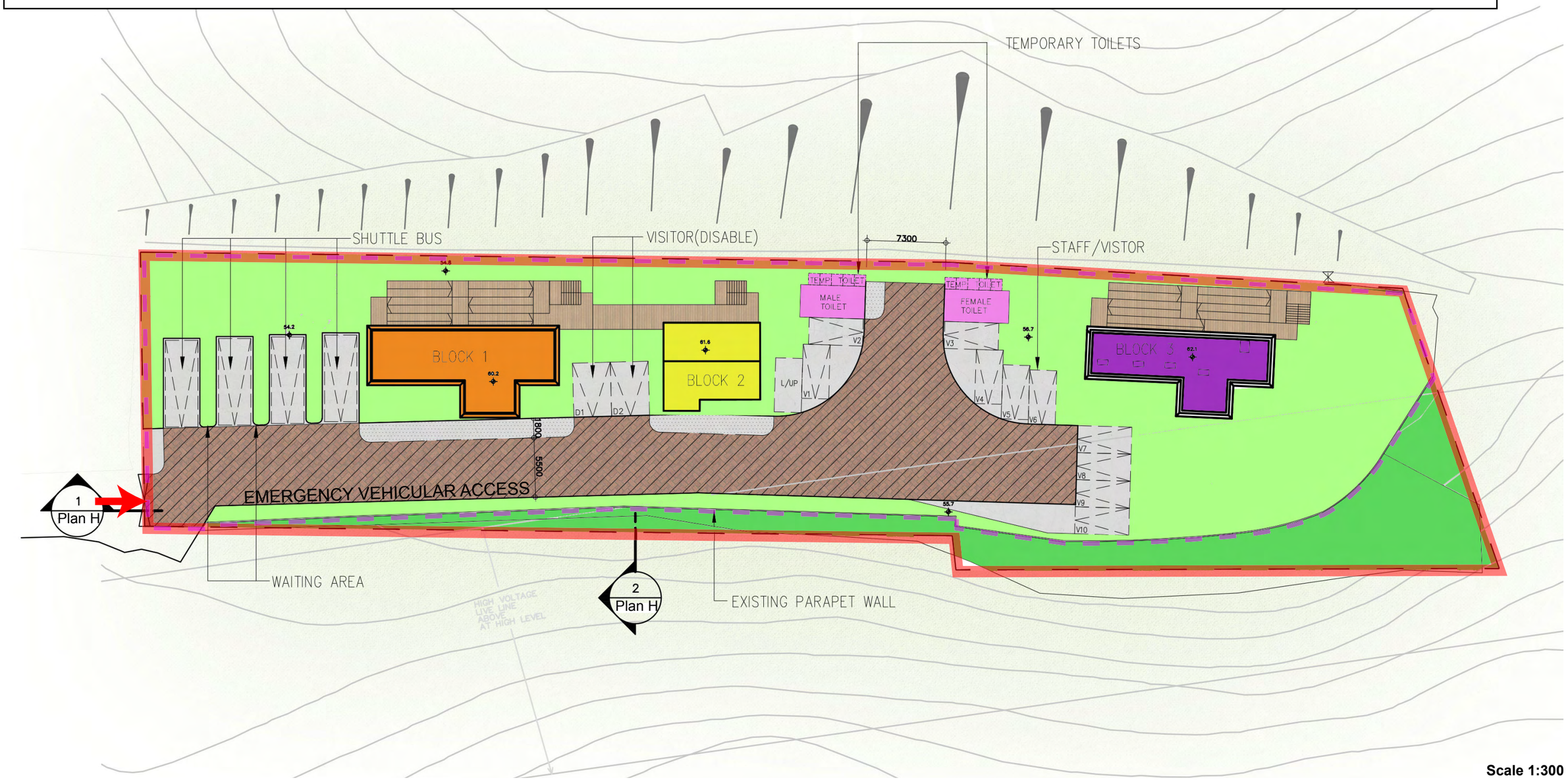
- Revised Master Layout Plan

-Revised Landscape Master Plan

- Revised Planting Plan

Legend

- The application site
- Existing concrete platform within the application site
- E.V.A
- Site entrance
- Landscape and Pedestrian circulation area
- Vegetated slope outside the application site
- Columbarium
- Columbarium and management office
- Religious Use and Columbarium
- Temporary Toilet
- Access ramp
- Pedestrian Zone



Scale 1:300

卓東設計顧問有限公司
A&B DESIGN CONSULTANTS LIMITED
TEL : 2339 2111
Unit 1706-07, 17/F., Prosperity Millennia Plaza, No. 663 King's Road, North Point

Plan F: Revised Master Layout Plan

LEGENDS

- Bamboo
- Shrub & Groundcover
- Lawn
- Buffering Trees
- Concrete Paving
- Conc. Block Paver
- Granite in Crazy Pattern
- Feature Paving Pattern
- Timber Deck

Total Site Area: 3137m^2

Landscape Green Area: 945m^2 (30.1%)



A Application Site Entry
B Shuttle Bus Bays
C Carpark reserved for Visitor (Disabled)
D Open Lawn Area
E Access Ramp to Upper Level
F Staircase to Upper Level
G Upper Level Viewing Terrace
H EVA WITH WHITE LINE MARKING
I Feature Paving to Building Entry
J Carpark reserved for Staff / Visitor
K Leisure Garden
L Multi function Plaza
M Timber Deck (Leisure Area)
N Pedestrian Path
O Buffering Trees Row
P Block 1 - Columbarium
Q Block 2 - Columbarium and management office
R Religious use and Columbarium
S Male Toilet
T Female Toilet
U Temporary Toilets

Scale 1:400

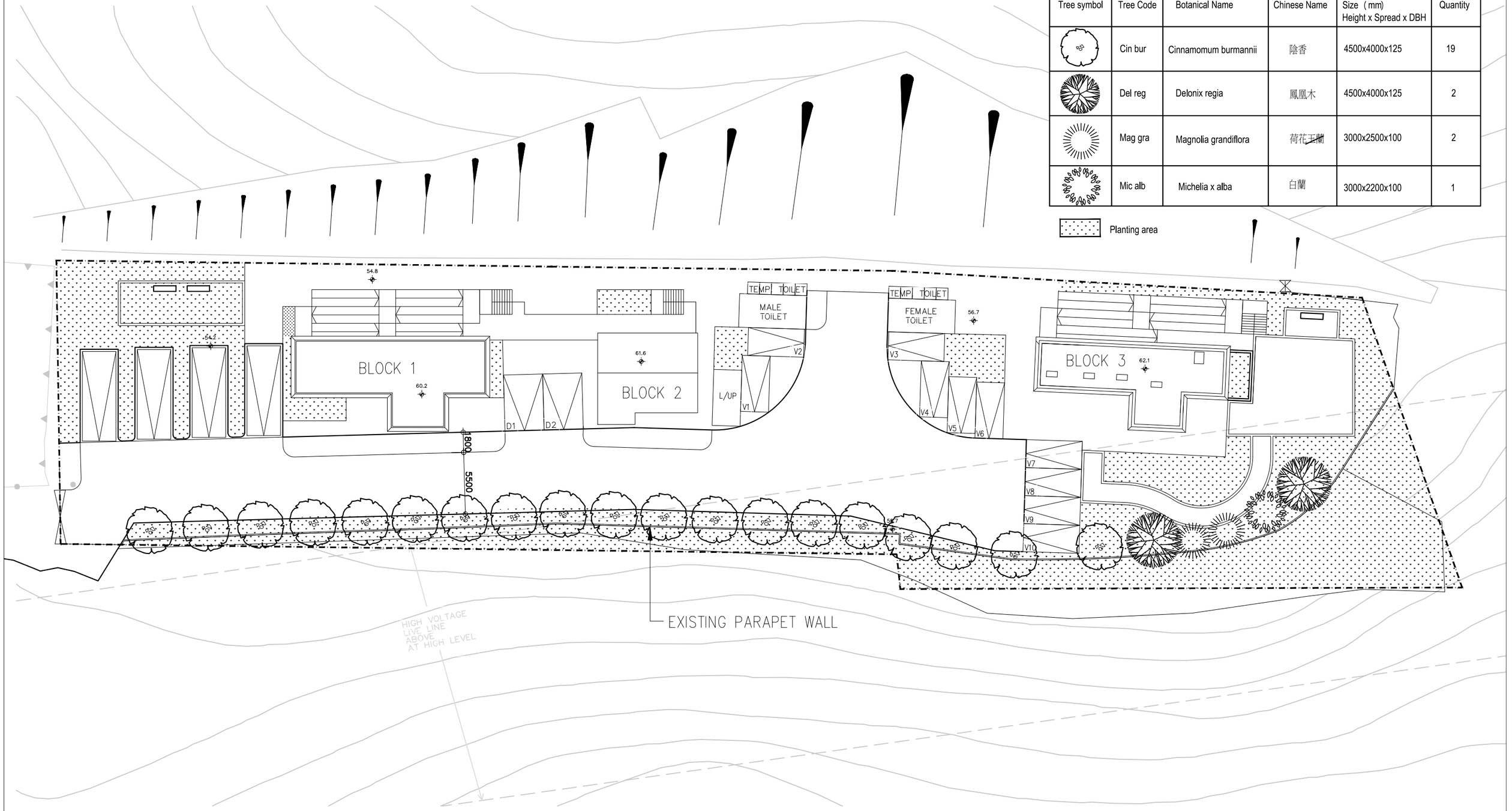
BLANC
BLANC DESIGN STUDIO

Plan N: Revised Landscape Master Plan

Proposed Planting List

Tree symbol	Tree Code	Botanical Name	Chinese Name	Size (mm) Height x Spread x DBH	Quantity
	Cin bur	Cinnamomum burmannii	陰香	4500x4000x125	19
	Del reg	Delonix regia	鳳凰木	4500x4000x125	2
	Mag gra	Magnolia grandiflora	荷花玉蘭	3000x2500x100	2
	Mic alb	Michelia x alba	白蘭	3000x2200x100	1

Planting area



Rezoning Application from "GB" to "G/IC" for a Religious Institution
at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D.132, Tuen Mun

N

0 5 10 20

PLANTING PLAN

BLANC DESIGN STUDIO

Tin Kwong Lung Yee Limited
Lot 1744 DD 132
Kwong Shan Village,
Hing Fu Street,
Tuen Mun, New Territories
(Management office address :
Room 1303, 13/F, Hung Tak Building,
No.106 Des Voeux Road Central, Hong Kong)
Tel : 2543 4233 Fax : 2503 5537

3rd December 2019

Mr. Daniel Wei/Mr. Ted Chan
Toco Planning Consultants
Room 1410, 14/F, Capital Centre,
5-19 Jardine's Bazaar,
Causeway Bay, Hong Kong By fax 2577 2862 & by post

Dear Sirs,

Re : Planning Department's enquiry
S12A Application
Applicant: Tin Kwong Lung Yee Ltd.

I acknowledge the query raised by the Planning Department, as conveyed by you, with regard to "how the Applicant's rights of access over the land concerned could be sustained if the term of lease and that for the proposed columbaria development is different".

Please note that the document giving effect to the "rights of way", and not just access, was no simple "agreement" but a "deed of rights of way" granted with a fixed term of years, now well registered as also registered easements, which are and will be capable of being enforced by specific performance under Order 86 of the Rules of High Court, High Court Ordinance, Chapter 4, the Laws of Hong Kong Special Administrative Region, if and when such rights of way or rights of access are adversely hindered or deprived of by anyone or by any means in breach of the Deed of Rights of Way. The grantee, the Applicant, is entitled to and enjoys the same term of years as the registered land owner does under the original land grant and/or any extension thereof under Section 6 of the New Territories Leases (Extension) Ordinance, Chapter 150, the Laws of Hong Kong Special Administrative Region. It is clear that if the term of years of columbaria licence is granted, if at all, within or shorter than that under the original land grant or any extension thereof, which the Applicant verily believes to be the case, there will be and can be no "difference", as so queried, there is in any event unlikely a grant of licence extending far beyond the term of years of any original land grant or any statutory extension.

Yours faithfully,

Wilson Ronald
(Project Consultant)
Director of the Applicant

c.c. Messrs. Collin Ng & Co., Solicitors, &
Mr. Roland LAU, Barrister-at-Law

Sole Proprietor
Collin K. W. Ng 吳國榮律師
LLB, LLM, LLM (ADR), MSBIS, MSF,
MBA, CPA, FCCA, ACMA

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Tel 電話: 3575 8980 Fax 傳真: 3575 8987
Email Address:

Our Ref: CN/747/19
Your Ref: Date: 22nd July, 2020

BY HAND

Toco Planning Consultants Ltd.,
Unit No.5, 13/F., Technology Plaza,
No.651 King's Road,
North Point, Hong Kong.

Dear Sirs,

Re: Intended (S.12A) rezoning application, Lot 1744, D.D.132 ("the Lot")
Applicant: Tin Kwong Lun Yee Limited

We have received instructions to act for the above-named Applicant in the above matter.

We are given to understand that your company is acting as Technical Consultant for our mutual clients in the intended application, and in particular, in the exchange of correspondence with the Planning Department insofar as their pending landscape queries are concerned.

We refer to the respective concerns expressed by the Landscape Unit, Urban Design and Landscape Sections, Planning Department (of 21 August 2019 and 31 December 2019 raised via memos), so made known and put before us, and are instructed to address the same in reply thereto on our clients' behalves.

We are obliged to offer our clients' apology for not being able to deal with and dispose of those concerns earlier or earlier enough due to the social unrest over the last year and the deadly global plague over the past six months which unfortunately and inevitably caused most block-downs of investigation and communication.

The planning concern apparently suggests or questions that if approval is ever made to rezoning application (such as that in our clients' present one) involving "vegetation" grown all along on the Lot since the existence of the (three) houses there in about 1960, which were removed in about 2008 and/or 2009, it will render or would have rendered more "attraction" of similar applications in the "GB" zone, therefore and thereby "undermining" the intactness of the "GB" zone. The concern also casted doubt and reservation on whether or not there would be precedent set for any undesirable "destruction before construction".

.../2

We are instructed and obliged to draw your attention to the following, in clarification of the factual matrix, to start with:-

1. Although our clients, by their directors or officers, have no personal knowledge as to the exact time when the (three) houses were built or erected on the Lot, there seemed to be no dispute that there were no trees or "vegetation" (originally or otherwise) on the Lot in and/or since about 1973 up to 1982 (at least), there is now produced and shown a copy aerial photo each in 1973 and 1982 for your easy reference (obtained by Authorized Land Surveyors) which clearly evidenced the same, and there was indisputably residential structures, gardens and vehicular passages ever since 1973;

2. Whatever "GB" or green belt (in its natural liberal) meaning (as a matter of legal interpretation) there may be construed or intended to extend, it appears that such did not mean and could not have meant that there must be or must remain "vegetation" (fully, partially or otherwise or at all) on the Lot (being a house lot) within the "GB" or green belt, as at the time of the making of Outline Zoning Plan ("OZP"), bearing in mind that the (three) houses were so built and erected subject to and with the benefit of the respective Building Licences granted in about 1960 (copy enclosed) long and well before the making of the OZP in about 1983;

3. Our clients' directors were informed who verily believe that probably because of the overhead pylon right above the Lot since if not before 1982, the (three) houses were not occupied and the Lot was vacated without human habitation, and therefore wild grasses and trees grew by themselves all around ever since, until about 2009 when our clients' predecessor-in-title purchased the Lot and started caring the same including clearing wild plantation, there is now produced and shown a copy aerial photo each in 1982 and 1983 indicating the where-about of the overhead pylon;

4. Our clients have been advised by Authorized Land Surveyors and legal representatives and verily believe that with the overhead pylon now right above and across the Lot, it is undesirable to allow too much, too wide and too high vegetation under or near the pylon and/or the Lot in observation of the necessary and strict legal duty of care, both statutory one and that in common law;

5. The enclosed copy aerial photo in 2008 showed the uncontrolled growth of wild grasses before the purchase of the Lot by the Predecessor aforesaid and the enclosed copy aerial photo in 2009 showed the condition of the Lot after clearance of the wild grasses;

6. The enclosed copy over-view drawing (prepared by Authorized Land Surveyors) is also produced and shown to pin-point the where-about of the overhead pylon, for avoidance of doubt, whereas the two enclosed copy (Mapping Office) plans showed the building of the pylon (during which original residents thereabout were moving out and away) and the enclosed photo just showed the abandoned dwelling there and then (retrieved from the record given to our clients);

.../3

7. Judicial notice ought to, and must, be taken that the relevant time, by which the prescribed, if any, definition or description, of any nature of land user was or should have been so construed or refer to, is such time when the relevant and effective OZP was gazetted and published in public (i.e. present one in Tuen Mun on 23rd July 1983) and not "2008", as you now so appear to suggest or rely on, the relevant gazette record is herewith enclosed;

8. Our clients have also been advised and verily believe that the Town Planning Board did approve rezoning with building application involved on and concerning green-belt or a plot or piece of land within green-belt (in fact the same subject piece of land herein, Lot 1744, D.D.132, though in that case it involved Section 16 instead, the underlying rationale must the same) and the fact that there were long ago building licences granted on the Lot (such as in our clients' case) speaks for itself. The copy Explanatory Statement (Page 76, Paragraph 2.1) on the amended OZP and its approval are enclosed for your easy reference.

In the circumstances, we are instructed and obliged to stress that it appears to be misconceived, and certainly ungrounded to suggest that as a matter of fact there were or had been any such green-belt "vegetation" (originally or otherwise) on and/or within the Lot at all material times. The nearby open carparking area or the pylon platform were and are clearly free from any "vegetation", though forming part or parcel of (or at least adjacent to) the green-belt (or GB). There is accordingly never any issue on and over any "destruction before construction", whether as put or at all, nor is there any undesirable attraction of more similar rezoning application as a result.

In any event, we are instructed and obliged to inform and confirm that application is being made to the Lands Department for the change of land users in public interest, which is being diligently processed, and we shall report to the Town Planning Department (via your company perhaps in due course) the progress thereof.

Our clients wish to assure the Town Planning Department, which we hereby humbly and respectfully do on our clients' behalves that every effort will be made by our clients to comply with and satisfy any and all such condition(s) as they may see fit and necessary to so impose for the purpose of and giving effect to the intended application.

Yours faithfully,

Collin Ng & Co.

c.c. Mr. Roland LAU, Barrister-at-Law &
Mr. Wilson RONALD & Miss YIP Yuk Ping &
Ted Chan & Associates Ltd (Authorized Land Surveyors)
Encls.

1973/12/07

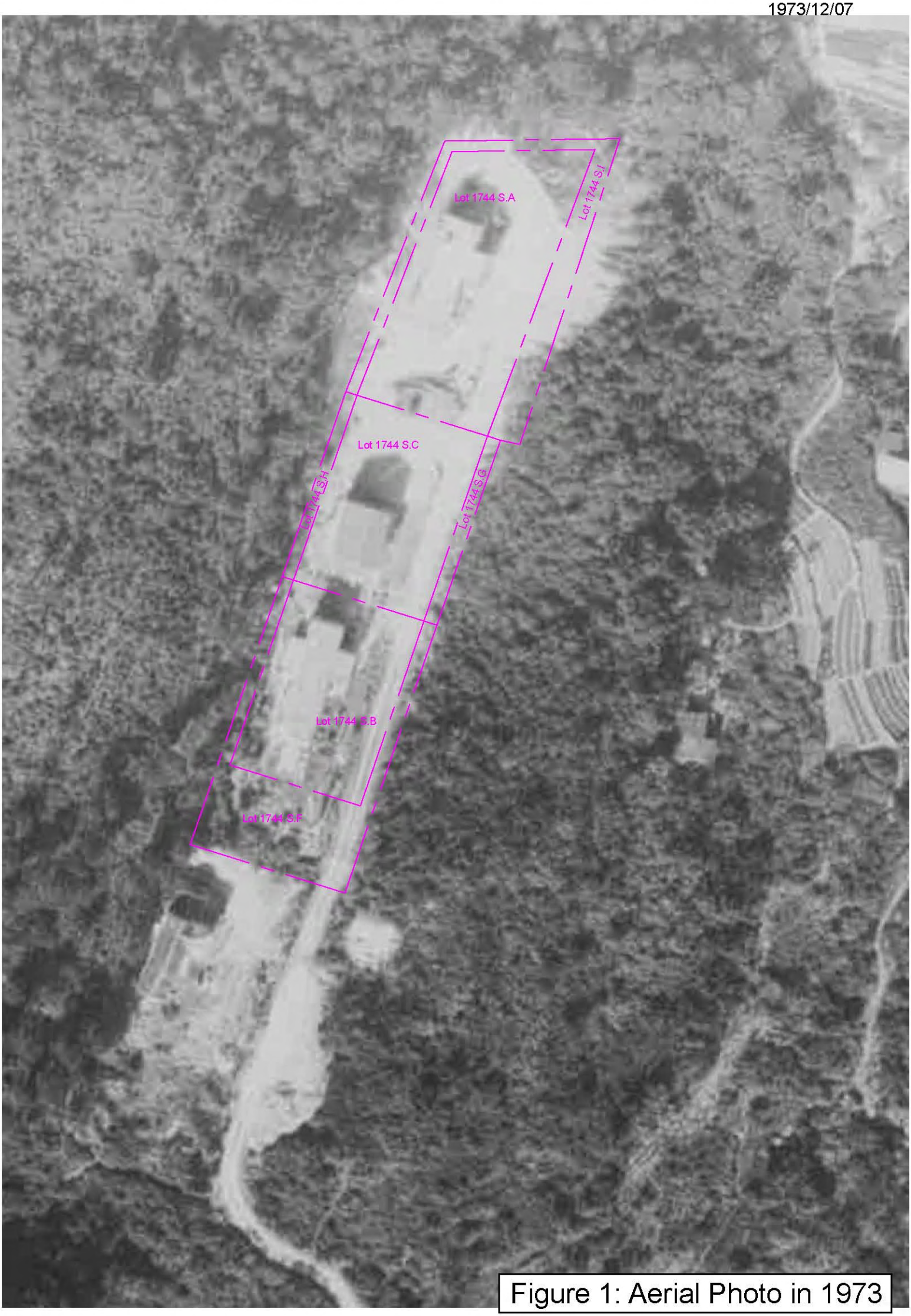


Figure 1: Aerial Photo in 1973

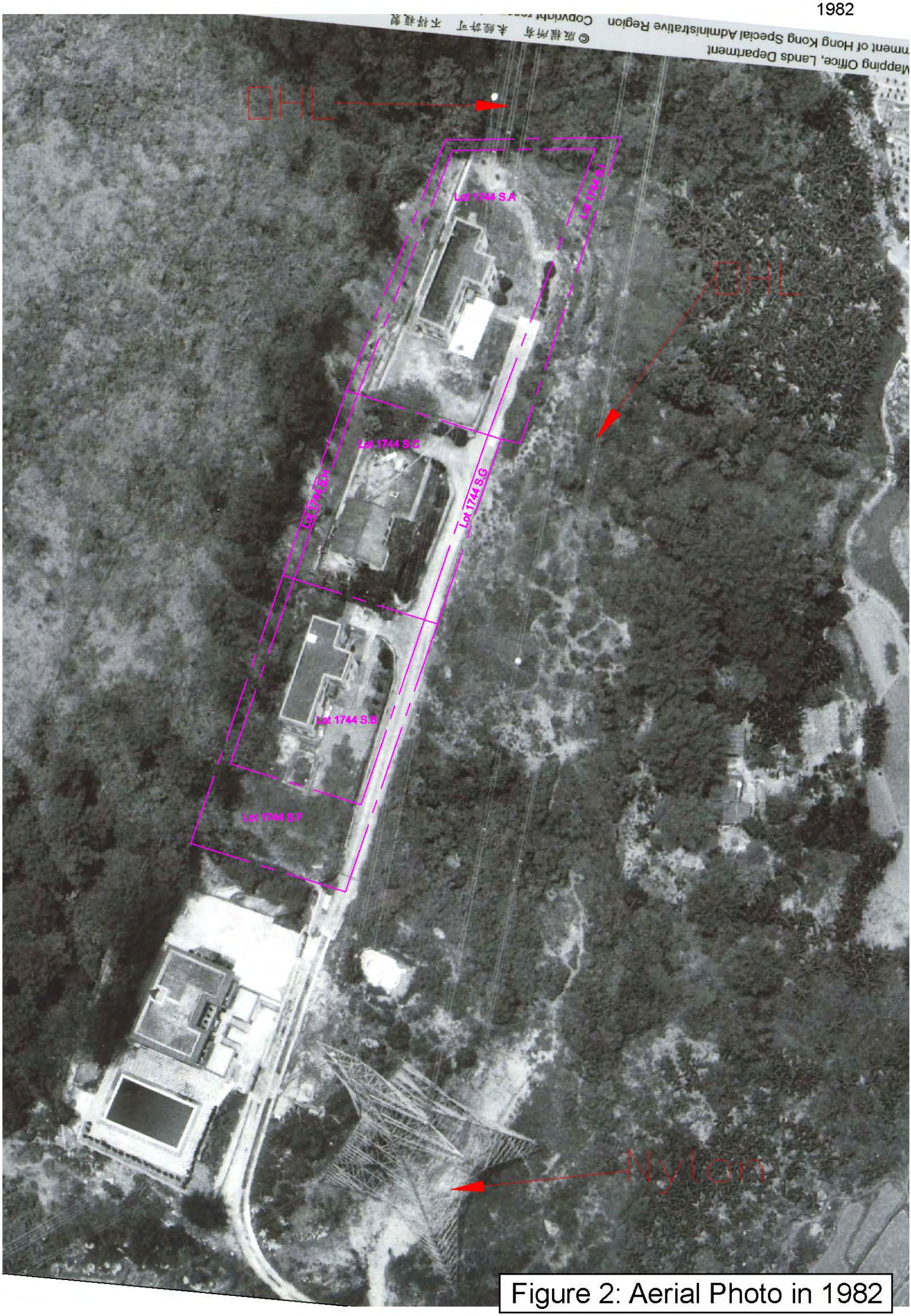


Figure 2: Aerial Photo in 1982

D.A.N.T. No. 46
2x100-6/58-134601

P.S. 78/1360/54

Premium paid: *vide* Miscellaneous Receipt No. R/N 491053

No. 0816

LICENCE FOR ERECTION OF BUILDING ON AGRICULTURAL OR GARDEN LAND IN THE NEW TERRITORIES

Name of Licensee Ho Wai Kham

of 216 Nam Cheong St., 1st fl. Kln.

Lot No. 17 HH A

in ..... Demarcation District No. 132

Area of building ..... 975 ..... sq. ft. or

..... .03 ..... acre.

Amount of Premium = $ 145.00 R/N 491053

Increased annual Crown Rent of $ 12.00

to be computed from 16th day of January 1960.

1. Building covenant = $ 7,000 to be completed within 2 years.
2. No realienation before fulfilment of B.C.
3. Licensee to observe all special conditions, except condition 1, published in G.N. 364/34 as amended by G.N. 50/40.
4. Before beginning to build, the Licensee shall obtain the District Commissioner's permission in writing to do so.
5. The Licensee shall not allow any building erected in pursuance of this licence to be used for human habitation until he has obtained the District Commissioner's written permission to do so.
6. After the date of the written permission mentioned in Condition 5 above-appearing, there shall be no alteration of the building without the District Commissioner's written permission to alter.

Hong Kong the 16th day of January 1960.

J. B. Jarvis

for District Commissioner, N.T.

duly authorized to grant licences for buildings on agricultural and garden land.

(x2 p. 956)

I agree to pay the Crown Rent specified above, and to comply with the conditions contained in the licence.

Hong Kong the 16th day of January 1960.

Witness.

Registered Owner or Agent.

Figure 3a: Building Licences granted in about 1960

D.A.N.T. No. 46
Rx100-6/58-B4601

RS 772/150/54

No. 0815

Premium paid: *vide* Miscellaneous Receipt No. R/N 491052

LICENCE FOR ERECTION OF BUILDING ON AGRICULTURAL OR GARDEN LAND IN THE NEW TERRITORIES

Name of Licensee Wong Sau Kau

of 181 Ha Kwai St. Kln

Lot No. 17448 B

in ..... Demarcation District No. 132

Area of building 475 sq. ft. or .103 acre.

Amount of Premium = $ 175-00 R/N 491052

Increased annual Crown Rent of $ 12-00

to be computed from 16th day of Jan. 1960.

1. Building covenant = $ Nominal to be completed within 2 years.
2. No realienation before fulfilment of B.C.
3. Licensee to observe all special conditions, except condition 1, published in G.N. 364/34 as amended by G.N. 50/40.
4. Before beginning to build, the Licensee shall obtain the District Commissioner's permission in writing to do so.
5. The Licensee shall not allow any building erected in pursuance of this licence to be used for human habitation until he has obtained the District Commissioner's written permission to do so.
6. After the date of the written permission mentioned in Condition 5 above-appearing, there shall be no alteration of the building without the District Commissioner's written permission to alter.

Hong Kong the 16th day of January 1960.

G. B. Traw
for District Commissioner, N.T.

duly authorized to grant licences for buildings on agricultural and garden land.

(12 p. 437)

I agree to pay the Crown Rent specified above, and to comply with the conditions contained in the licence.

Hong Kong the 16th day of January 1960.

Witness.

Tang Shing Hon
Registered Owner or Agent.

Figure 3b: Building Licences granted in about 1960

D.A.N.T. No. 46
3x100-6/58-B4601

LNT. 27/HN/29.

Premium paid: *vide* Miscellaneous Receipt No. 560293 of 27/4/60

No. 0852

LICENCE FOR ERECTION OF BUILDING ON AGRICULTURAL OR GARDEN LAND IN THE NEW TERRITORIES

Name of Licensee ... Ho Lai Chan ...

of 209 Tai Yuen Str., 1st fl. Kln. ...

Lot No. ... 17HHC ...

in ... Demarcation District No. 132 17HHC

Area of building ... 749 sq. ft. or ... .02 acre.

Amount of Premium = $... 149.80 R/N 545290 10/4/60

Increased annual Crown Rent of $... 8.00 ...

to be computed from ... 27th ... day of ... April ... 1960.

1. Building covenant = $... 8,000 ... to be completed within 2 years.
2. No realienation before fulfilment of B.C.
3. Licensee to observe all special conditions, except condition 1, published in G.N. 364/34 as amended by G.N. 50/40.
4. Before beginning to build, the Licensee shall obtain the District Commissioner's permission in writing to do so.
5. The Licensee shall not allow any building erected in pursuance of this licence to be used for human habitation until he has obtained the District Commissioner's written permission to do so.
6. After the date of the written permission mentioned in Condition 5 above-appearing, there shall be no alteration of the building without the District Commissioner's written permission to alter.

Hong Kong the 27th day of April 1960.

G. B. Traw

for District Commissioner, N.T.

duly authorized to grant licences for buildings on agricultural and garden land.

(X2 p. 969)

I agree to pay the Crown Rent specified above, and to comply with the conditions contained in the licence.

Hong Kong the 27th day of April 1960.

Witness.

Jung Shing Hon for Ho Lai Chan

Registered Owner or Agent.

Figure 3c: Building Licences granted in about 1960

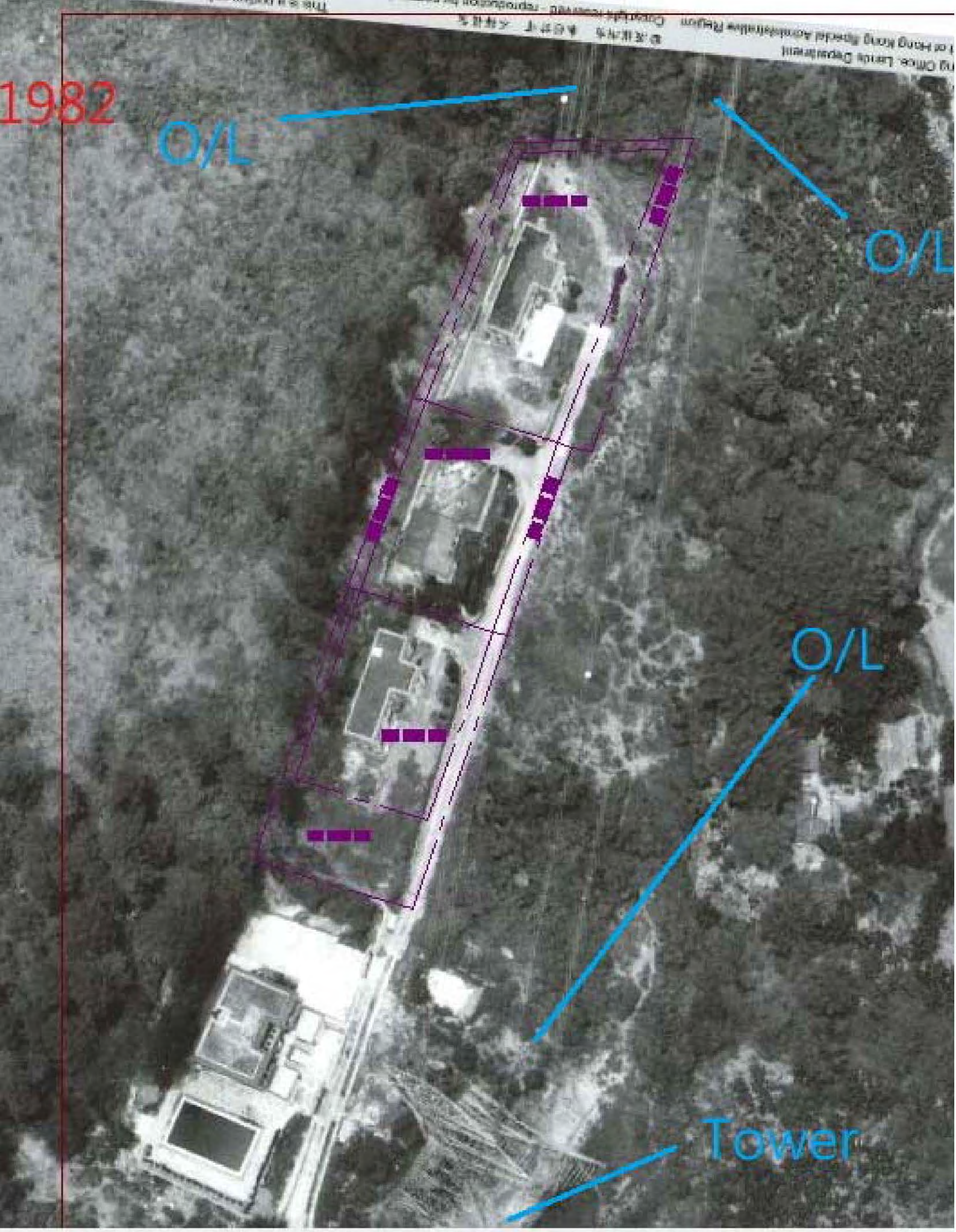


Figure 4: Aerial Photo in 1982 (indicating the overhead pylon)

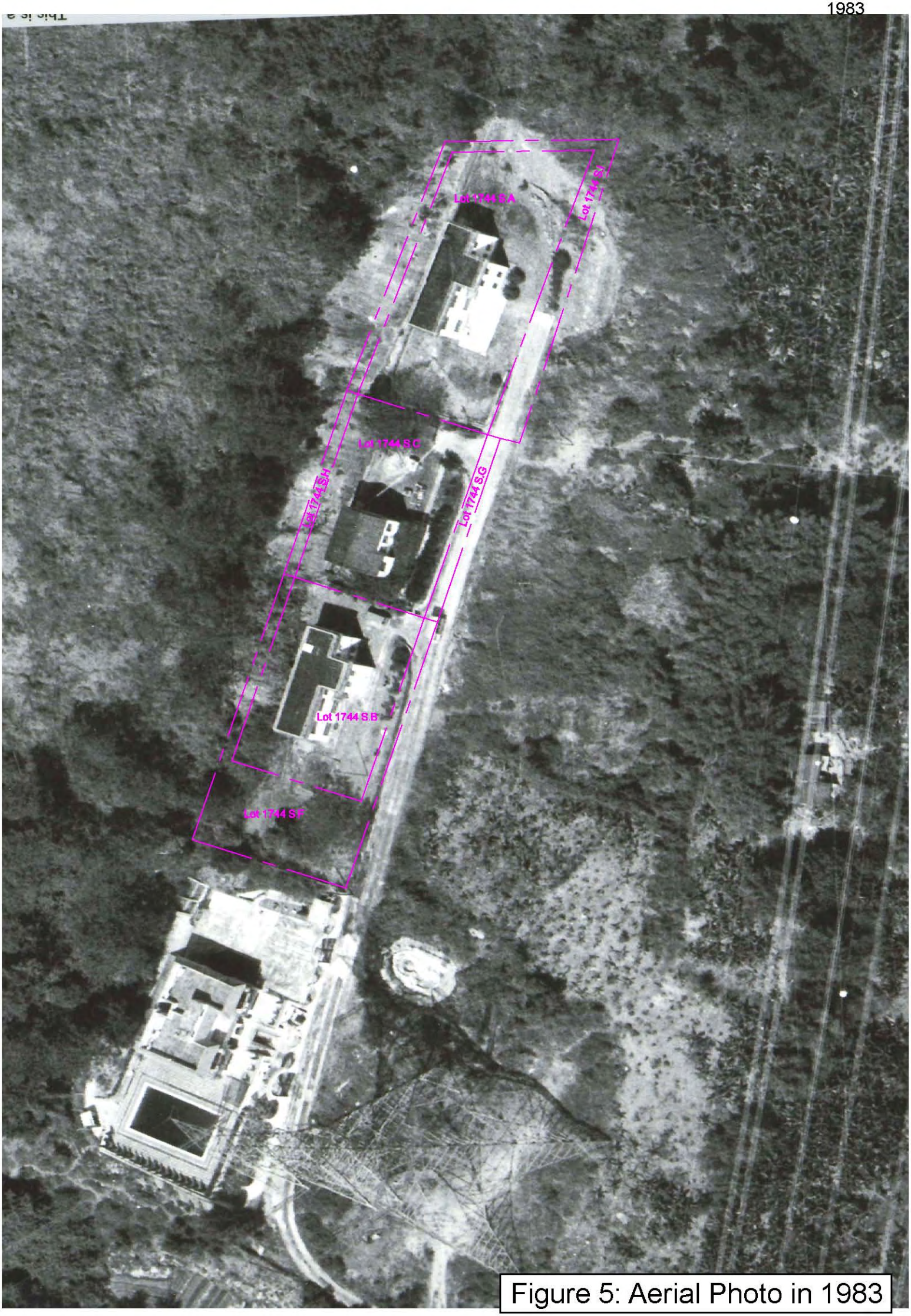


Figure 5: Aerial Photo in 1983

2008



Figure 6: Aerial Photo in 2008

2009



Figure 7: Aerial Photo in 2009

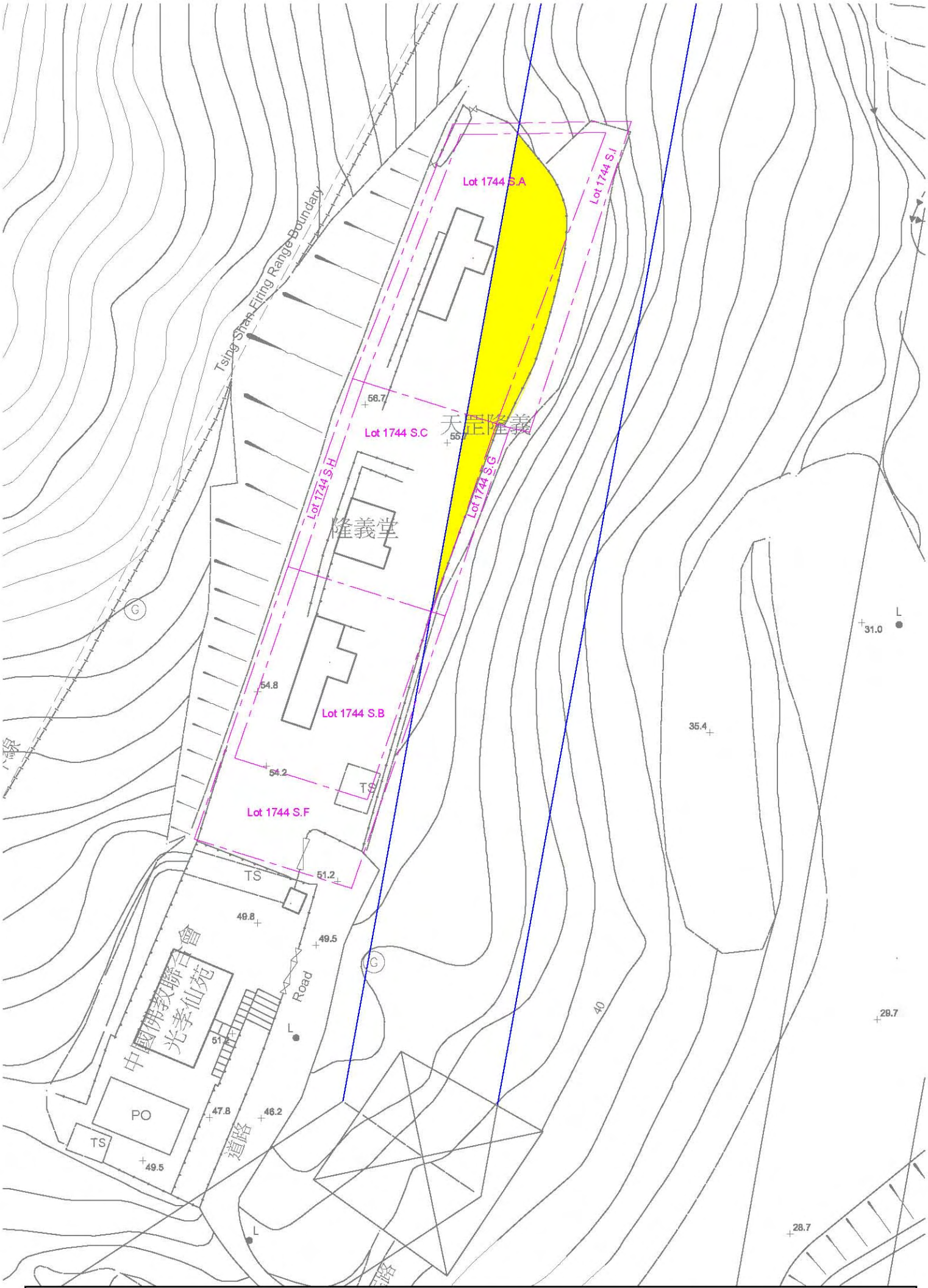


Figure 8: Over-view Draing Prepared by Authorized Land Surveyors

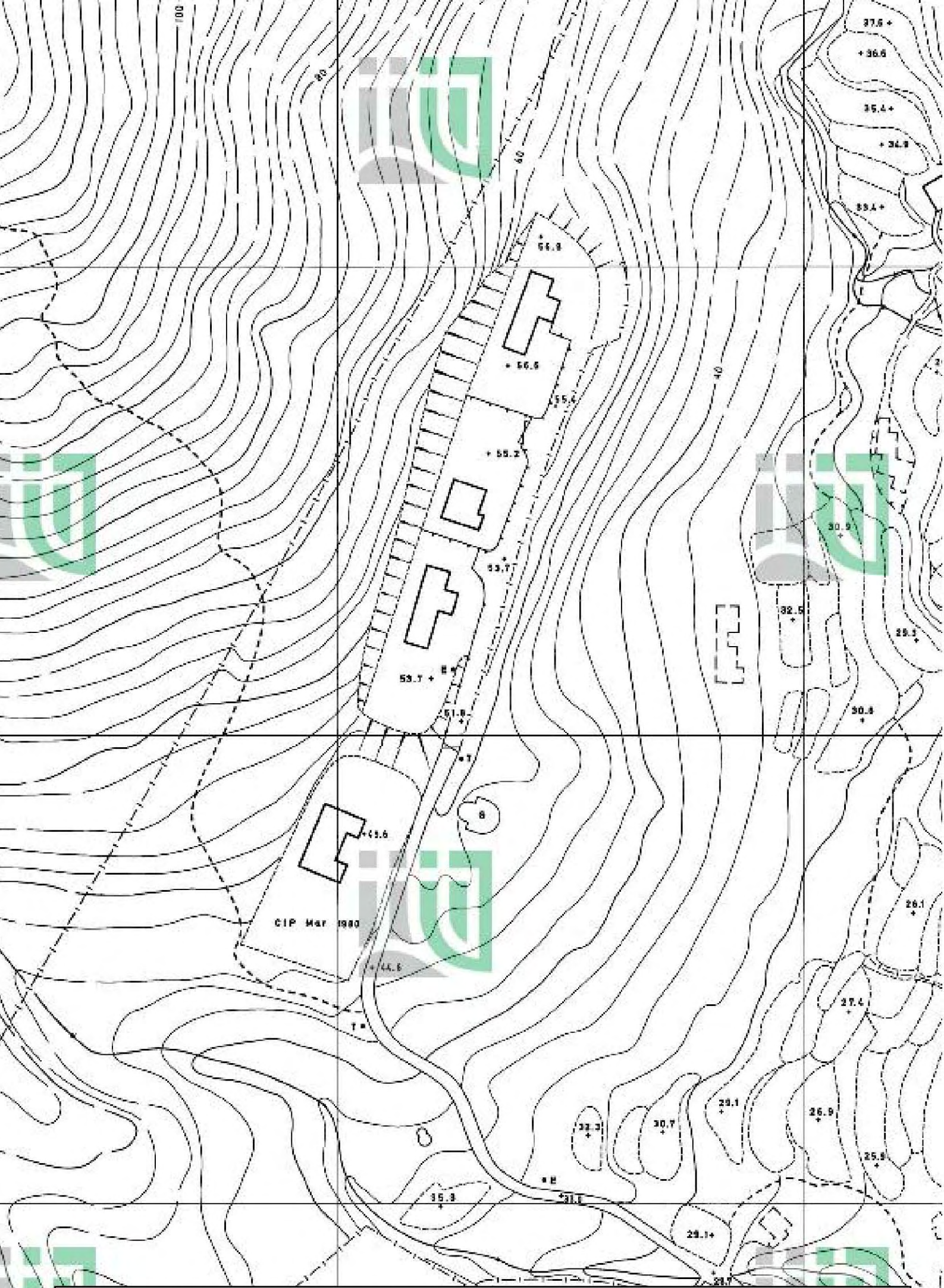


Figure 9: Historical Survey Plan in 1980 (Extracted from Mapping Office)

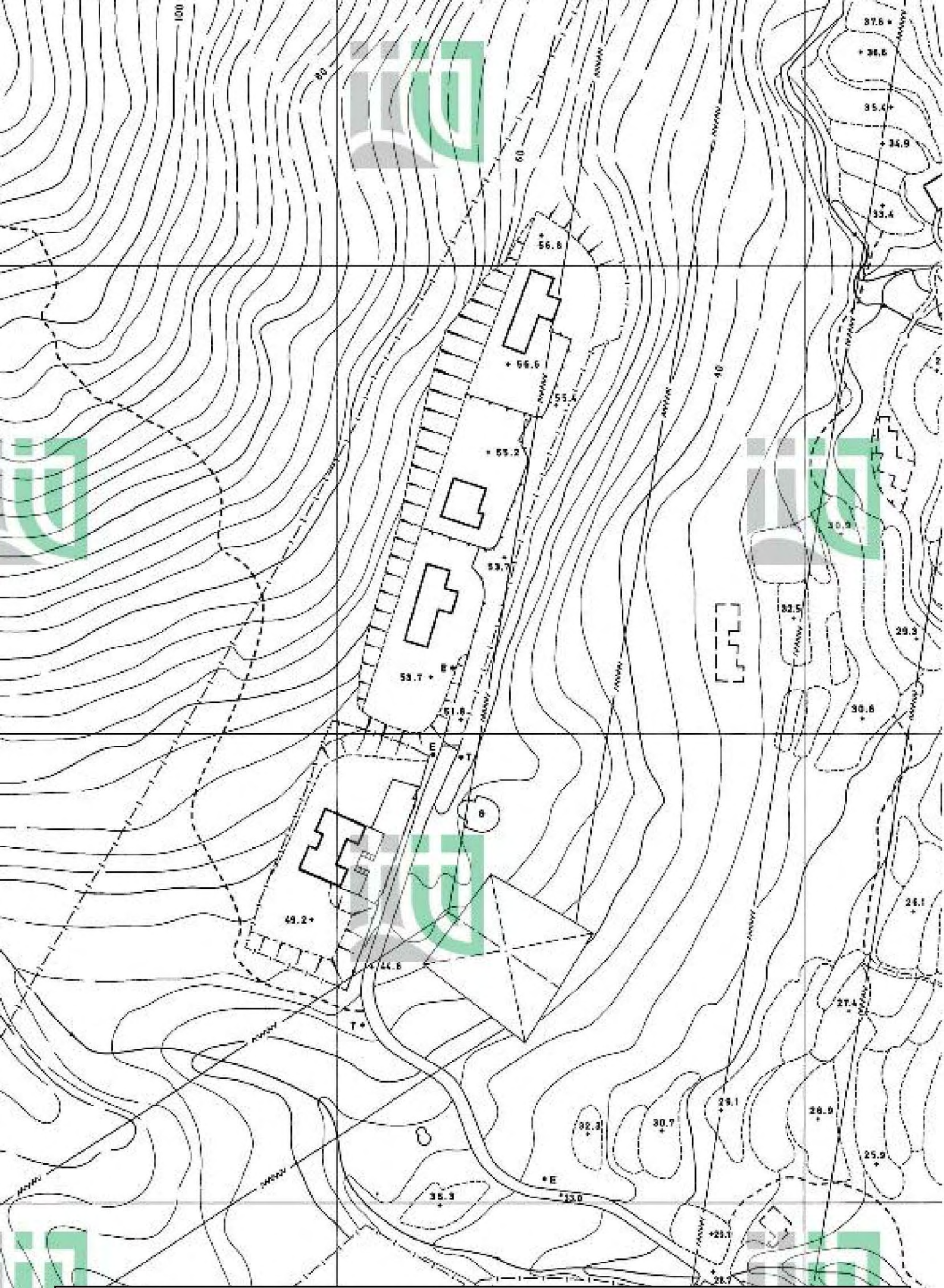


Figure 10: Historical Survey Plan in 1983 (Extracted from Mapping Office)



Figure 11: Site Photo before 2008 (Retrieved from the record given to our clients)

IX. 其他意見

請申請人注意，在根據《城市規劃條例》第 12A 條/第 16 條向城市規劃委員會（城規會）提交規劃申請前，應先向發牌委員會就牌照申請提交已獲合資格人士核證的建議圖則（包括龕位資料），並在骨灰所辦完成審核及設有龕位資料後，才向城規會提交規劃申請。

在提交規劃申請時，申請人應利用夾附在申請指引附件 8 中附錄 1 的表格一併提交龕位數目的詳情，並應提交可容納的訪客量及人場管制／交通及公共運輸安排／人流管理／應對火警或其他緊急情況的應變方案等資料。

首份涵蓋有關地點的法定圖則的公告在憲報刊登的日期是: 1983 年 7 月 29 日。申請人如要求享有「現有用途」權利，須提供足夠有力證據以證明該申請處所在有關首份法定圖則刊憲之前已被用作並在其後一直持續用作「鑪灰安置所」用途，主要詳情如下:

- *在緊接首份涵蓋申請地點／處所的法定圖則的公告在憲報刊登前已被用作「鑪灰安置所」用途及其規模（即地點／處所的範圍及龕位數目）的證明；及*
- *自首份涵蓋申請地點／處所的法定圖則的公告在憲報刊登以來一直持續進行「鑪灰安置所」用途及其規模（即地點／處所的範圍及龕位數目）的證明。*

有關證明包括布局圖、地點／處所的照片／航攝照片、已批准的建築圖則、短期豁免書、短期租約、租賃協議、商業登記申請表、土地業權證明及單據等。

規劃署向私營骨灰安置所事務辦事處提出上述意見的日期： 13/1/2020

*刪去不適用者

'指除第1部分所述的執法行動以外的法律事宜。

根據《私營骨灰安置所條例》(第630章)
規劃署建議列入"須符合的要求的通知書"內的關乎規劃的要求

就骨灰安置所/~~擬建前骨灰安置所~~*申請牌照/~~牌照及暫免法律責任書~~/~~牌照、豁免書及暫免法律責任書~~*

~~(適用於2017年6月30日前已售出的龕位/~~
適用於在2017年6月30日未售出的龕位)'

骨灰安置所名稱：天罡隆裝
申請人姓名： 天罡隆裝有限公司
骨灰安置所地址：新界屯門興富街嶺山村天罡隆裝 (丈量約份第132約地段1744號A, B, C, E, G, H及I)

檔號：(61) in FEHD PC 72-40/62/2018/018 Pt.2 (牌照)
檔號：(64) in FEHD PC 72-40/64/2018/019 (暫免法律責任書)

項目	申請人須符合的要求
1	*申請人可：* *a. 根據《城市規劃條例》第16條向城規會提出規劃許可申請，每宗申請將按其個別情況作考慮，請注意若城規會在有附帶條件下批給許可，申請人須在完全履行附帶的條件後，方可視為符合「關乎規劃的要求」；* *及/或* *b. 根據《城市規劃條例》第12A條向城規會提出修訂法定圖則申請，每宗申請將按其個別情況作考慮，請注意縱使城規會同意/部份同意有關申請，亦不一定代表可即時符合「關乎規劃的要求」；* *i) 若城規會同意把「鑪灰安置所」用途納入擬議地帶的第一欄用途之內，相關法定圖則須在作出修改後（即直至草圖刊憲後），方可視為完全符合「關乎規劃的要求」；或* *ii) 若城規會同意把「鑪灰安置所」用途納入擬議地帶的第二欄用途之內，申請人仍須根據《城市規劃條例》第16條向城規會提交規劃許可申請，若城規會在有附帶條件下批給許可，申請人須在完全履行附帶的條件後，方可視為符合「關乎規劃的要求」；* *及/或* *c. 要求享有法定圖則下「現有用途」權利，請注意任何人士如要求享有「現有用途權利」，須提供足夠證據，以證明他有資格享有這項權利，*

規劃署向私營骨灰安置所事務辦事處提出上述意見的日期： 13/1/2020

Figure 12: Planning Department Advice (Extracted from Page 5 & 6 of Annex 1 attached to FEHD's Letter dated 22.1.2020)

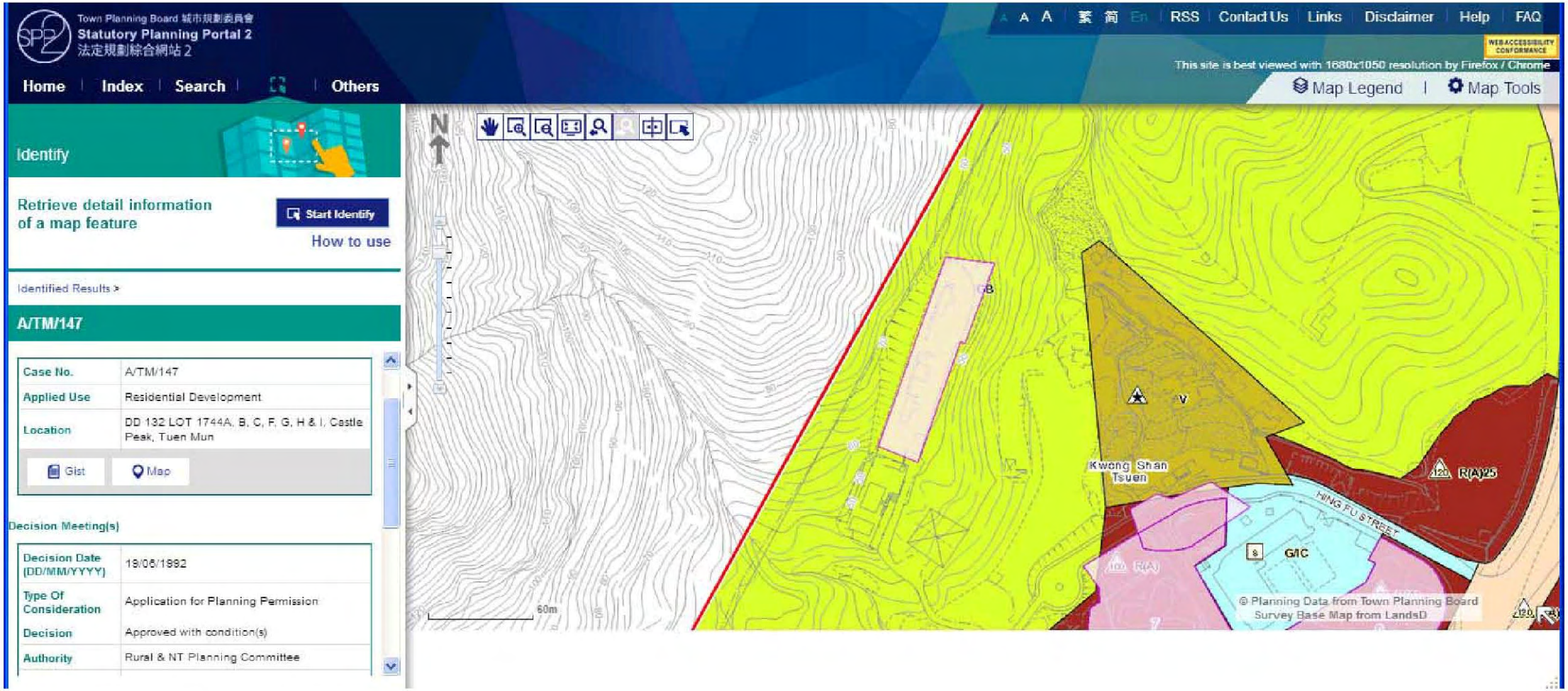


Figure 13: TPB Approved Record (Information extracted from TPB Statutory Planning Portal)

APPROVED TUEN MUN OUTLINE ZONING PLAN NO. S/TM/35

(Being an Approved Plan for the Purposes of the Town Planning Ordinance)

EXPLANATORY STATEMENT

Note : For the purposes of the Town Planning Ordinance, this statement shall not be deemed to constitute a part of the Plan.

1. INTRODUCTION

This explanatory statement is intended to assist an understanding of the approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35. It reflects the planning intention and objectives of the Town Planning Board (the Board) for the various land use zonings of the Plan.

2. AUTHORITY FOR THE PLAN AND PROCEDURE

2.1 On 21 August 1973, the Board was directed by the then Governor under section 3 of the Town Planning Ordinance (the Ordinance) to prepare a draft statutory plan for Tuen Mun New Town. Since the exhibition of the draft Tuen Mun OZP No. LTM/2 on 29 July 1983, the OZP had been amended several times and exhibited for public inspection under section 7 of the Ordinance.

2.2 On 16 August 1988, the then Governor in Council (G in C) approved the draft Tuen Mun OZP No. S/TM/6 under section 9(1)(a) of the Ordinance. On 24 October 1989, the then G in C referred the approved OZP No. S/TM/6 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.

2.3 On 21 January 1994, under the power delegated by the then Governor, the then Secretary for Planning, Environment and Lands directed the Board, under section 3(1)(a) of the Ordinance, to extend the coverage of the Tuen Mun OZP. The OZP was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.

2.4 On 27 May 1997, the then G in C, under section 9(1)(a) of the Ordinance, approved the draft Tuen Mun OZP, which was subsequently renumbered as Plan No. S/TM/9. On 7 October 1997, the Chief Executive in Council (CE in C) referred the approved OZP No. S/TM/9 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.

2.5 On 19 January 1999, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tuen Mun OZP, which was subsequently renumbered as Plan No. S/TM/11. On 30 November 1999, the CE in C referred the approved OZP

Figure 14: Explanatory Statement (Page 76) on the Tuen Mun OZP

Sole Proprietor
Collin K. W. Ng 吳國榮律師
LLB, LLM, LLM (ADR), MSBIS, MSF, MBA, CPA, FCCA, ACMA

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287-299 Queen's Road Central, Sheung Wan, Hong Kong.
香港上環皇后大道中 287-299 號 299 QRC 602 室
Tel 電話: 3575 8980 Fax 傳真: 3575 8987
Email Address:

Our Ref: CN/MIS/000747/19 For attention of
Your Ref: Date: 5th December 2020

By fax 2577 2862 & by hand
Toco Planning Consultants Ltd.,
Unit 5, 13/F, Technology Plaza,
No.651 King's Road,
North Point, Hong Kong.

Attn : Mr. Ted Chan/Mr. Daniel Wei

Dear Sirs,

Re : Application under Section 12A, Town Planning Ordinance
Rezoning Application from "GB" to "G/IC" for a Religious Institution and Columbarium in Tin Kwong Lun Yee,
Lot Nos.1744A-C and 1744G-I in D.D. 132, Tuen Mun (Ref:TPB/Y/TM/23)
Applicant: Tin Kwong Lun Yee
Urban design & Landscape Concern via memo dated 17.8.2020
under ref :( ) in UDY/TM/23 (for attention of Mr. Lee/Mr.Marco Yip)

We refer to the above Application, the captioned memo and the subsequent discussion between Mr. Yip and Mr. W. Ronald (one of the Applicant's director) on 4th December 2020.

We are instructed and obliged to submit, which we hereby do on behalf of the Applicant, the following in reply to, and hopefully in satisfactory and final disposal of, the captioned concern :-

1. The removal of trees/plantation in 2008-2009 from the site took place apparently pursuant to the development by the previous land owner under the government grant of the building licence, and it therefore ought to, if not must, follow that no "breach" of "use" or "user" (limited and confined to the very site area of course), legally and/or factually, in that, (1) there was unambiguous representation of the government to the then owner for such limited development despite the site being within green belt; (2) the then owner having duly taken and relied on such representation and acted on it by carrying out certain development including and not limited to building house, land/construction foundation, making/providing necessary walk-path and vehicular access (under the doctrine of necessity of land use easement) therein and thereon; & (3) the then owner, the Applicant's predecessor in title, suffered detriment (expenditure then of development/building, and now your insisted dispute or claim over the removal), and as such, the government is, and must be, estopped from so denying or enforcing against such easement running with land;

.../2

2. Moreover, application for formal town planning rectification under the present Section 12A and the forthcoming Section 16, are both underway, in addressing and "remedy" of the alleged breach, in light of the change of government policy (with regard to columbaria provision applied for or being approved); and

3. Further and in an alternative in any event, the Applicant has duly evinced its intention and undertaking to provide vegetation plantation and/or greenery as you may accept approve from the landscape point of view, in the revised landscape plan (already submitted in about July 2020 by your company as the Applicant's technical consultant), a copy of which having been resent to the Urban Design/Landscape Unit via your email of 04 Dec.,2020 (copy enclosed for avoidance of doubt).

In the circumstances, please inform and reconfirm the Town Planning authority and let them rest assured of the Applicant's due revised proposal and undertaking in this very respect, and respectfully and humbly pray on our behalf for their kind and prompt reconsideration of the reservation of the Urban Design/Landscape Unit accordingly.

We shall be grateful for their prompt patronizing advice in reply.

Yours faithfully,

Collin Ng & Co.
Solicitors for the Applicant

c.c. Client &
Mr. Roland LAU, Barrister-at-Law

Encl.

COLLIN NG & CO., SOLICITORS
吳 律 師 事 務 所

Sole Proprietor
Collin K. W. Ng 吳國榮律師
LLB, LLM, LLM (ADR), MSBIS, MSF, MBA, CPA, CGMA, FCCA, ACMA

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Tel 電話: 3575 8980 Fax 傳真: 3575 8987
Email Address: general@collinngsolicitors.hk

Our Ref: CN/MIS/000747/19 Your Ref:
Date: 4th February 2021

By fax 2577 2862 & by post
Toco Planning Consultants
Room 1410, 14/F, Capital Centre,
5-19 Jardine's Bazaar,
Causeway Bay, Hong Kong
Attn : Mr. Ted Chan/Mr. Daniel Wei

Dear Sirs,

Re : S12A (Rezoning Application) Town Planning Ordinance
Applicant: Tin Kwong Lung Yee Ltd.
Transport Department's request for "co-ordination" of Columbaria applicants in the traffic arrangement in around Kwong Shan Village (礦山村), Tuen Mun, N.T.

We are instructed that our client, the above Applicant have been made aware of the (remaining/persistent) concern of the Transport Department as related to you via a Senior Planning Officer, Tuen Mun Mr. MAK Weng Yip, Alexander, that "it should be co-ordinated with other columbarium sites in particular to the opening period …" (see Item 9 of Annex 1, Comments on the TIA).

We are instructed and obliged to stress in reply and in clarification, for avoidance of any doubt, if at all, to the concern as follows :-

1. There are three other "columbarium sites" apparently around Kwong Shan Village, namely 光孝仙苑, 祥隆精舍 and 益豐精舍, apart from our client;

2. the process of 光孝仙苑's application for columbaria licence has just been refused and put to a cessation before the end of January 2021, and therefore plays, and will pay no role of significance insofar as any traffic issue is concerned;

3. The other two "columbarium sites" are both located in Lot 1724, and our client is located in 1744, quite opposite and right the other end of or on the road, and not adjacent nor next to one another, and the only public access probably in common appears to be the round-about slightly below (see attached Photos A ("Annexure A");

4. There is hence on facts, despite the purported "relation" of the "sites", no valid ground to so "relate" insofar as road users are concerned;

5. When one visits the purported two other "columbarium sites" on Lot 1724 (DD 132) aforesaid which appear to be nothing more than two simple small huts, the road leading thereto is distinct and unrelated to that to our client's columbaria;

6. In strict and clear clarification, the round-about concerned in fact and in effect is right next to one open ground (now open car park) of considerable big area over several thousand square feet on one side, and other branches of roads or exits around (see attached Photos B ("Annexure B"). There is therefore no ground for any alleged concern over any "overflow" or "overload" of pedestrians or passers at any given moment of time from the strict traffic assessment point of view, and the TIA consultant's submitted data and materials for our client do not appear to be flawed or not correct in any way, which the Transport Department alleged to disagree with;

7. It is noted and to be borne in mind that the area near and around the said round-about belong to the government and always open for the widening whether there are columbarium sites or not;

8. The other two "columbarium sites" on Lot 1724 are in fact closed most of the time and no one appeared to be attending thereat, nor anyone came by, not at least from 2nd February 2021 to 4th February 2021 (consecutive two whole days, not to mention other time);

9. The purported "relation of sites" is therefore inexplicable and undesirable but not realistic despite its Kwong Shan Village vicinity at a glance;

10. Apart from the lack of access thereto, nor attendees thereat, the other two "columbarium sites" may be operated by one "Able Fortune Enterprise Limited (祥隆企業有限公司)" and one "Citifair Management Limited (益豐管理有限公司)", as our client endeavoured to search for and found, but no updated annual returns thereof appeared to have been filed by them, which clearly showed and suggested that they are not actively operated, nor currently operated or at all (see attached Companies Registry record ("Annexure C"));

11. In any event, it is quite inconceivable to see any justification, either on facts or in law that, the different columbaria licence applicants of different location or area affected are required to consult or "co-ordinated with each other" on any rights of way in public and in wide and wild open area;

12. Further or in the alternative, even if, which is certainly not the case, there had been any alleged "relation" of sites, the success of any columbaria application by any individual applicant may be distinct from (but not depend on) each other, what "co-ordination" is to be made in the circumstances is totally unknown, to suit or meet the Transport Department's alleged concern in "determining" any

alleged "combined effects on traffic", and such success, if any or at all, must be weighed and assessed individually on (real) merits, and not speculation nor assumption (of any success?), it would be totally chaotic or prejudicial and unfair if and when unmeritorious or irrelevant application is unnecessarily included or taken into consideration thereby affecting the other genuine and meritorious one!

13. Further or in the alternative and in any event, if the Transport Department or the Planning Department is of any view that the other two "columbarium sites" may affect or hinder our client's rezoning application, whoever it may be, they should (or even must) let our client have all relevant information or materials to enable our client to know what case it is to meet or answer (i.e. what alleged combined effects there may be by the two, and what possible, if at all, logistic figure they may involve, and how any such logistic figure may hinder or affect the other, and in the absence of any such information or material, it is absolutely unknown how and why the other rezoning applicant should be dragged into any "relation" or "co-ordination";

14. As our client is never made aware of any TIA from or by the other two "columbarium sites", and unless any enlightenment is made to our client with a copy thereof to our client, our client is not in any position to assist the Transport Department's alleged concern;

15. And further or in the alternative, the rezoning application is not to encroach upon the jurisdiction of the columbaria authority in considering or determining any merits for licence, and there is therefore no valid ground, one way or the other for the Transport Department to seek to simply "adopt" the other two columbaria sites' TIA submission (if any or at all) without proper examination thereof;

16. The bare and/or simple denial of our client's TIA consultant is just unsupported and leaves so much room to be desired;

17. Although the other two "columbarium sites" rezoning applications may be prima facie made for a right in private, it is nevertheless respectfully submitted to be one within the public law;

18. It is respectfully quoted that "since R v Panel on Take-overs & Mergers ex p. Datafin Plc (1987), the demarcation line between public and private law has focused on whether the decision-making body took the decision challenged in the course of its public functions, rather than on the nature of the source of the power to make the decision". When the Director of Lands decides whether to renew a mining lease (or to grant a lease), "he is exercising a public function" and "he has to balance the interests of the lessee in having his lease renewed (or a lease granted) against the interests of the public which may be affected by long-term mining continuing at the site". The legal position so quoted was made clear in Hong Kong Clays And Kaolin Company Ltd. v The Director of

Lands HCMP No.3718 of 1996 (as per the judgment of The Hon. Mr. Justice Keith dated 8th April 1997);

19. Our client is no doubt those affected, or the section of the public being affected thereby, and are hence entitled to voice their legitimate concern and protect their interests, if any adverse TIA assertion is so made by them, or any;

20. It must be pointed out unless clear and reliable evidence is known that the relevant junctions or round-about are currently overloaded in any peak period or any period and will so be in the coming year, there is hardly any ground to consider how the two small huts may entertain a large number of visitors at any given moment of time so much so to affect those to our client's;

21. It was clearly pointed out in Sunday Times v United Kingdom (1979) 2 EHRR 245 and R v Governor of Brockhill Prison, ex p Evans (No.2) (2002) 2 ACIP at 38 and endorsed in Hashimi Habib Halin v Director of Immigration HCAL 139/2007 (as per the judgment of Hon. Saunders J. dated 15th October 2008) that "the law should enable those affected by it reasonably to foresee the consequences of their actions". "The person who may be affected by the policy must be able to be access the policy prior to any decision based upon the policy which may affect them, so that they may order their affairs in the light of the policy";

22. In Lloyd v McMahon (1987) AC 625 at 702, Lord Bridge described the principles of procedural fairness : " ... what the requirements of fairness demand when any body, domestic, administrative or judicial, has to make a decision which will affect the rights of individuals depends on the character of the decision making body, the kind of decision it has to make and the statutory or other framework in which it operates", which was endorsed by Hon. Hartmann J. in Fine Tower Associates Ltd. v Town Planning Board in HCAL 5/2004 (as per the judgment dated 25th April 2005);

23. The well settled principle of procedural fairness was enunciated by Lord Mustill in R v Secretary of State for the Home Department, ex parte Doody (1994) 1 AC 531, at 560. In considering the acts of an administrative tribunal conducting what may be described as a consultation process, Lord Diplock stated in Bushell v Secretary of State for the Environment (1981) AL 75, at 95 that "Fairness, ... also requires that the objects should be given sufficient information about the reasons relied on by the department as justifying the draft scheme to enable them to challenge the accuracy of any facts and the validity of any arguments upon which the departmental reasons are based";

24. The majority of the English Court of Appeal held in R v Secretary of State for the Home Department, Ex parte, Fayed (1998) 1 WLR 763, that "... fairness required that, before reaching his decision, the Secretary should inform an applicant of the nature of any matters weighing against the grant of the application and afford him an opportunity of addressing them ... since the

Secretary had failed to adopt such a course, his decision had been reached unlawfully." Such was endorsed by Hon. A Cheung J. in Ho Sum Keung v Director of Lands in HCAL 123/2003 (as per the judgment dated 27th May 2005);

25. In light of the authorities cited above, our client does have a right to be "informed (at least) … of the evidence of opinion, asserted policy, fact or mixed fact and law upon which the decision-making being intended to rely (or did rely) so that it could make representations in respect of that evidence". Any purported decision, such as the alleged disagreement of the Transport Department before conclusion of any consultation hence appeared to be premature unrealistic but ungrounded and unjustified. There is so far nothing supplied on the issue of potential adverse environmental impacts by our client's application;

26. The Court of Appeal in CACV 106/2006 (date of judgment 8/11/2006) accepted, in granting leave to appeal, that "it seems arguable that "the Town Planning Board simply adopted the Planning Department's assertions of fact without resolving the factual issues raised by the Applicant … the Town Planning Board may therefore have abdicated its decision making responsibility";

27. As was pointed out aforesaid, in the absence of evidence or facts on any adverse traffic impacts, including those in future, the Town Planning Department cannot, and is not expected to, "simply adopt the Transport Department's "disagreement" view of our client's TIA report, or so to deny it;

28. In the circumstances and by reason of the aforesaid, it is humbly and respectfully submitted that our client's rezoning application now before the Town Planning Board, as it stands, ought not to be hindered or affected by the other three "columbaria sites" who are either deemed to fail in any application for columbaria licence or play no significant or genuinely significant role in operating any "columbaria" provision; and

29. The further information herewith annexed should in any event address and/or dispose of the Transport Department's alleged concern accordingly in all circumstances.

Please therefore convey this above reply to the relevant departments or authority on behalf of our mutual client, the Applicant.

Yours faithfully,

COLLIN NG & CO., SOLICITORS

Encls.
c.c. client

Annexure A Photo A (1)
04 FEB 2021









Photo A (2)
04 FEB 2021 5









小3回航拍照片 Photo B (1)

04 FEB 2021 3



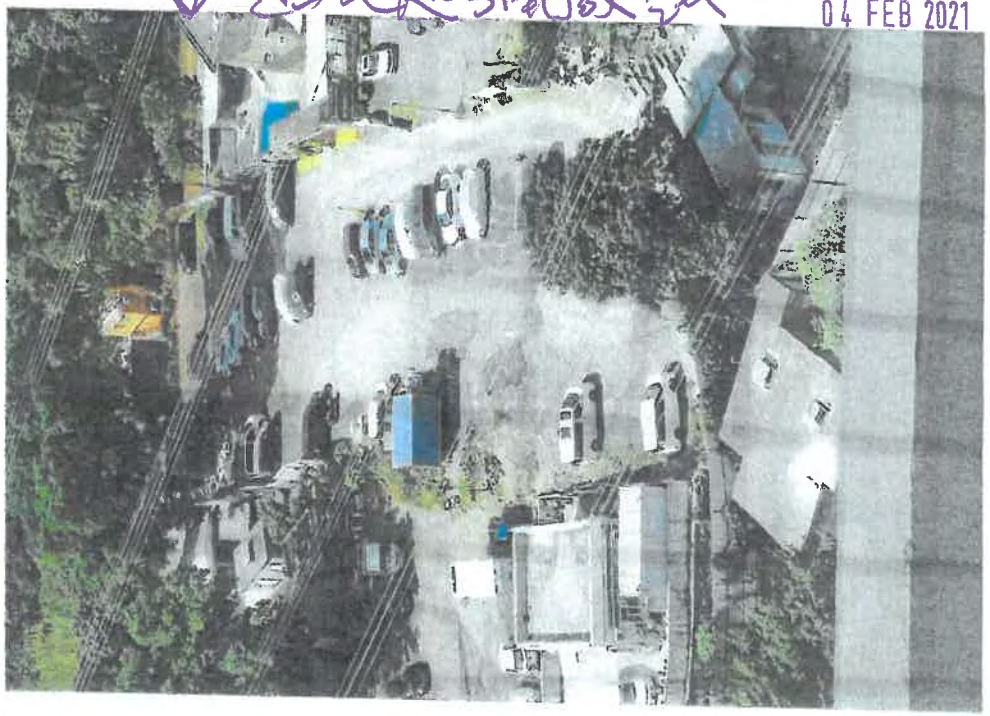
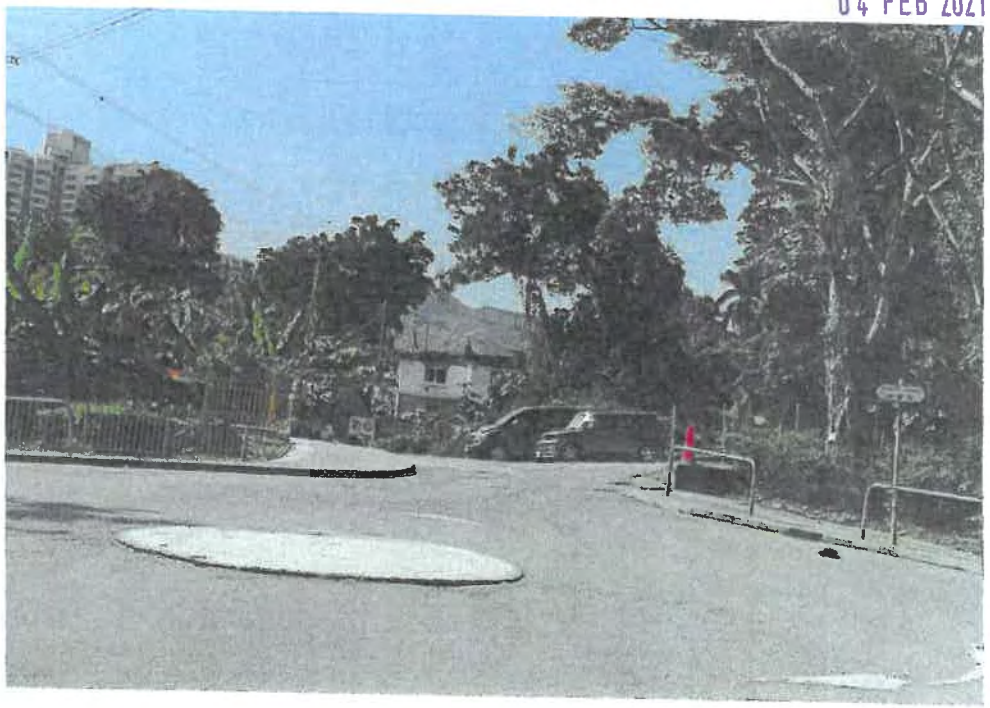






Photo B(2)
04 FEB 2021

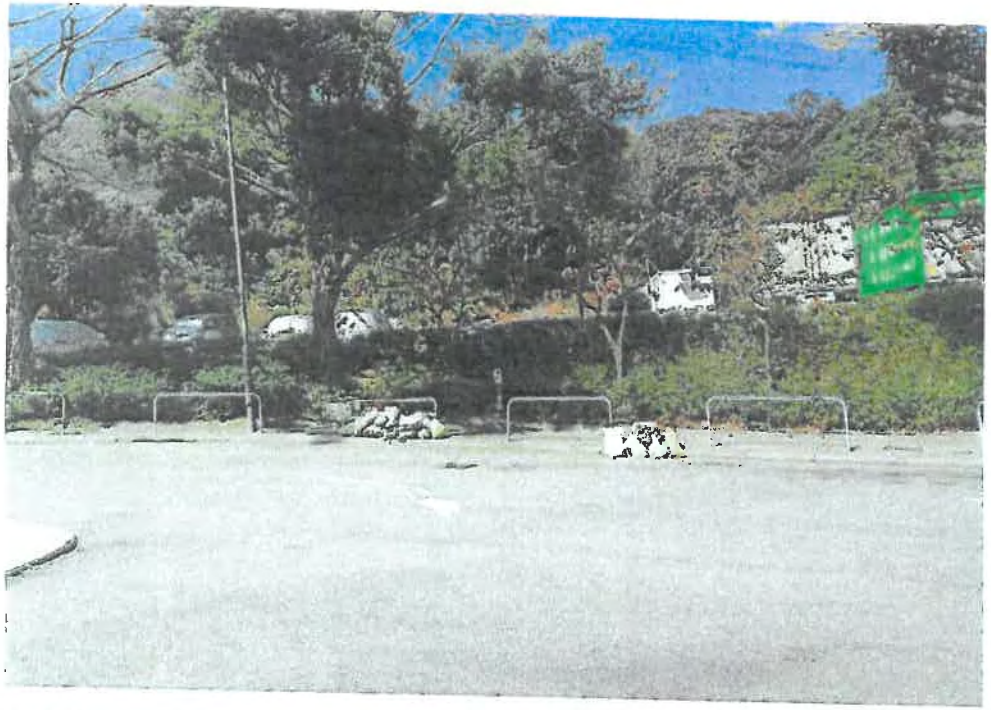








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Annex C(4)



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CR No.:	1695375
Company Name:	ABLE FORTUNE ENTERPRISE LIMITED 祥隆企業有限公司
Company Type:	Private company limited by shares
Date of Incorporation:	03-JAN-2012
Active Status:	Live
Remarks:	-
Winding Up Mode:	-
Date of Dissolution / Ceasing to Exist:	-
Register of Charges:	Unavailable
Important Note:	-

Name History

Effective Date	Name Used
03-JAN-2012	ABLE FORTUNE ENTERPRISE LIMITED 祥隆企業有限公司

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			9	(E)FNAR1 - Annual Return	2015	26-JAN-2015	23101075358	9	248KB	Available
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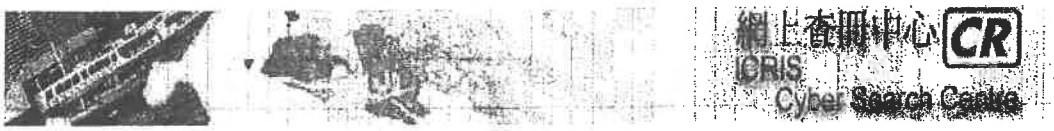
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			13	(E)FD2A - Notification of Change of Secretary and Director (Appointment/Cessation)	-	03-FEB-2012	22700664155	5	171KB	Available
			14	(E)FR1 - Notification of Change of Address of Registered Office	-	13-JAN-2012	22700664154	1	29KB	Available
			15	Certificate of Incorporation	-	03-JAN-2012	40005354212	1	24KB	Available
			16	(E)Memorandum & Articles of Association	-	03-JAN-2012	23100643419	8	260KB	Available
			17	(E)FNC1 - Incorporation Form (Company Limited by Shares)	-	03-JAN-2012	23100643417	6	170KB	Available

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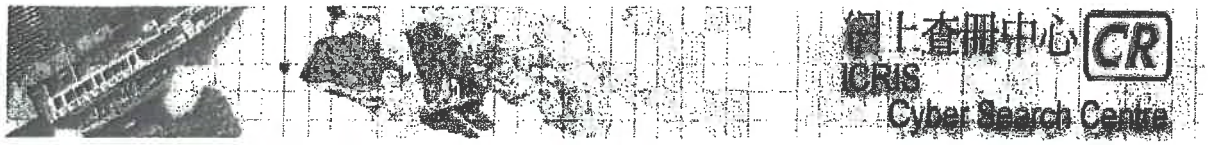
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CR No.:	1407648
Company Name:	CITIFAIR MANAGEMENT LIMITED 益豐管理有限公司
Company Type:	Private company limited by shares
Date of Incorporation:	04-JAN-2010
Active Status:	Live
Remarks:	-
Winding Up Mode:	-
Date of Dissolution / Ceasing to Exist:	-
Register of Charges:	Unavailable
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04-JAN-2010	CITIFAIR MANAGEMENT LIMITED 益豐管理有限公司

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			5	(E)FND2A - Notice of Change of Company Secretary and Director (Appointment/Cessation)	-	20-FEB-2019	22301797991	3	161KB	Available
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			7	(E)FNR1 - Notice of Change of Address of Registered Office	-	22-MAR-2018	23301365507	1	52KB	Available
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			18	(E)FD2A - Notification of Change of Secretary and Director (Appointment/Cessation)	-	03-NOV-2011	22900819841	3	113KB	Available
			19	(E)FAR1 - Annual return (with a list of members)	2011	11-FEB-2011	23400662717	13	292KB	Available
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			23	(E)FD2A - Notification of Change of Secretary and Director (Appointment/Cessation)	-	21-JAN-2010	23600388665	8	301KB	Available
			24	(E)FSC1 - Return of Allotments	-	21-JAN-2010	23600388664	3	78KB	Available
			25	Certificate of Incorporation	-	04-JAN-2010	40003366716	1	20KB	Available
			26	(E)FNC1 - Incorporation Form (Company Limited by Shares)	-	04-JAN-2010	23100452414	6	175KB	Available
			27	(E)Memorandum & Articles of Association	-	04-JAN-2010	23100452413	9	331KB	Available

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附件 1

香港警務處對根據《私營骨灰安置所條例》(第630章)
就~~骨灰安置所 /~~截算前骨灰安置所*申請牌照時提交的管理方案的意見

(~~適用於2017年6月30日前已售出的龕位~~ /
適用於在2017年6月30日未售出的龕位)*

骨灰安置所名稱	:	天罡隆義
申請人姓名	:	天罡隆義有限公司
骨灰安置所地址	:	新界屯門礦山村興富街 (丈量約份第132約地段第1744號A分段, 1744號B分段, 1744號C分段, 1744號F分段, 1744號G分段, 1744號H分段及1744號I分段) [只包括2017年6月30日仍未售出的龕位]

檔號：(5) in FEHD PC 72-40/62/2018/018 Pt.2 (Licence)

本處對題述申請(包括申請人就申請提交的建議圖則)的意見如下：

I. 對私營骨灰安置所的管理方案的意見

[請在以下其中一個方格內加上✓號。]

☑ 管理方案可以接受，而本處不反對向有關截算前骨灰安置所~~ / 骨灰安置所~~*發出牌照。

☐ 就有關截算前骨灰安置所 / 骨灰安置所*的牌照申請而言，管理方案不可接受，理由是：

_____

_____

☐ 申請人須提供進一步資料，以便本處審核私營骨灰安置所的管理方案是否可以接受。申請人須提供的資料載列於附錄 1(見第 III 部)。

II. 對牌照申請人提交的建議圖則的意見

[請在以下其中一個方格內加上✓號。]

12-AUG-2019 12:09 SUPWING +852 2200 4329 P.02/04

☑ 本處對上述牌照申請的建議圖則並無意見。

☐ 本處對上述牌照申請的建議圖則有以下意見：

_____

_____

III. 對將列入"須符合的要求的通知書"內的要求的意見

[請在以下其中一個方格內加上✓號。]

☑ 就上述牌照申請，本處對將列入"須符合的要求的通知書"內的要求並無意見。

☐ 就上述牌照申請，本處建議把附錄 1 所載的要求列入發給申請人的"須符合的要求的通知書"。

IV. 建議對將發出的牌照(如批准)施加的條件

如私營骨灰安置所發牌委員會決定批准這宗申請，

[請在以下其中一個方格內加上✓號。]

☐ 本處建議對牌照施加附錄 2 所載的條件。

☑ 本處對施加於牌照的條件並無任何建議。

☐ 本處會待牌照申請人報告已符合"須符合的要求的通知書"內有關管理方案的要求後，才提出建議(見附錄 1)。

V. 訴訟程序

[請在以下其中一個方格內加上✓號。]

☑ 本處與上述申請指明文書的私營骨灰安置所或申請人現時沒有進行與上述申請有關的訴訟程序。

☐ 本處與上述申請指明文書的私營骨灰安置所或申請人現正進行與上述申請有關的訴訟程序，詳情如下：

12-AUG-2019 12:10 SUPWING +852 2200 4329 P.03/04

附件 1

VI. 其他意見

香港警務處向私營骨灰安置所事務辦事處提出上述意見的日期：
2019年8月12日

**刪去不適用者*

附件 1

香港警務處對根據《私營骨灰安置所條例》(第630章)就~~骨灰安置所 / ~~截算前骨灰安置所*申請牌照時提交的管理方案的意見

(適用於2017年6月30日前已售出的龕位 /
~~適用於在2017年6月30日未售出的龕位~~)*

骨灰安置所名稱	:	天罡隆義
申請人姓名	:	天罡隆義有限公司
骨灰安置所地址	:	新界屯門礦山村興富街 (丈量約份第132約地段第1744號A分段, 1744號B分段, 1744號C分段, 1744號F分段, 1744號G分段, 1744號H分段及1744號I分段) [只包括2017年6月30日前已售出的龕位]

檔號：(9) in FEHD PC 72-40/62/2018/017 Pt.2 (Licence)

本處對題述申請(包括申請人就申請提交的建議圖則)的意見如下：

I. 對私營骨灰安置所的管理方案的意見

[請在以下其中一個方格內加上✓號。]

☑ 管理方案可以接受，而本處不反對向有關截算前骨灰安置所~~ / 骨灰安置所~~*發出牌照。

☐ 就有關截算前骨灰安置所 / 骨灰安置所*的牌照申請而言，管理方案不可接受，理由是：

_____

_____

☐ 申請人須提供進一步資料，以便本處審核私營骨灰安置所的管理方案是否可以接受。申請人須提供的資料載列於附錄 1(見第 III 部)。

II. 對牌照申請人提交的建議圖則的意見

[請在以下其中一個方格內加上✓號。]

☑ 本處對上述牌照申請的建議圖則並無意見。

☐ 本處對上述牌照申請的建議圖則有以下意見：

_____

_____

III. 對將列入"須符合的要求的通知書"內的要求的意見

[請在以下其中一個方格內加上✓號。]

☑ 就上述牌照申請，本處對將列入"須符合的要求的通知書"內的要求並無意見。

☐ 就上述牌照申請，本處建議把附錄 1 所載的要求列入發給申請人的"須符合的要求的通知書"。

IV. 建議對將發出的牌照(如批准)施加的條件

如私營骨灰安置所發牌委員會決定批准這宗申請，

[請在以下其中一個方格內加上✓號。]

☐ 本處建議對牌照施加附錄 2 所載的條件。

☑ 本處對施加於牌照的條件並無任何建議。

☐ 本處會待牌照申請人報告已符合"須符合的要求的通知書"內有關管理方案的要求後，才提出建議(見附錄 1)。

V. 訴訟程序

[請在以下其中一個方格內加上✓號。]

☑ 本處與上述申請指明文書的私營骨灰安置所或申請人現時沒有進行與上述申請有關的訴訟程序。

☐ 本處與上述申請指明文書的私營骨灰安置所或申請人現正進行與上述申請有關的訴訟程序，詳情如下：

附件 1

VI. 其他意見

香港警務處向私營骨灰安置所事務辦事處提出上述意見的日期：
2019年8月12日

**刪去不適用者*

TOCO PLANNING CONSULTANTS LTD.
TOWN PLANNING, ENVIRONMENT & DEVELOPMENT CONSULTANCY
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Tel: 2895 0168
Fax: 2577 2862
E-mail: tocoplanning@hotmail.com
Website: http://www.tocoplanning.com

達材都市規劃顧問有限公司

Home Affairs Department
Tuen Mun District Office
2/F, Tuen Mun Government Offices,
1 Tuen Hi Road,
Tuen Mun, New Territories

Attn.: Ms. FUNG Ngar Wai, Aubrey, JP

Dear Madam,

9 February, 2021

**Section 12A Rezoning Application from "GB" to "G/IC"
for a Religious Institution and Columbarium in Tin Kwong Lun Yee,
Lot Nos. 1744A-C and 1744G-I in D.D. 132, Tuen Mun**

We are the planning consultant of Tin Kwong Lun Yee (天罡隆義/ TKLY) Limited, a religious institution at various lots in D.D. 132, Tuen Mun. A section 12A rezoning application for regularising the Pre-cut-off Columbarium ancillary to TKLY was submitted to the Town Planning Board on 28.6.2019 (TPB Application No A/TM/23).

In order to improve the condition of the existing access road between the roundabout of Hing Fu Street and the application site, the Applicant proposes to widen the aforesaid road for the provision of a 1.5m wide footpath and 3 passing bays along the road. The Applicant will be responsible for the design and construction for the road widening scheme up to the satisfaction of the relevant government departments.

As requested by the District Lands Officer/ Tuen Mun, a copy of the latest road improvement plan is enclosed for your perusal. The proposed scheme will be revised from time to time subject to the departmental requirements. Please contact the undersigned for any additional information required pertinent to the proposal.

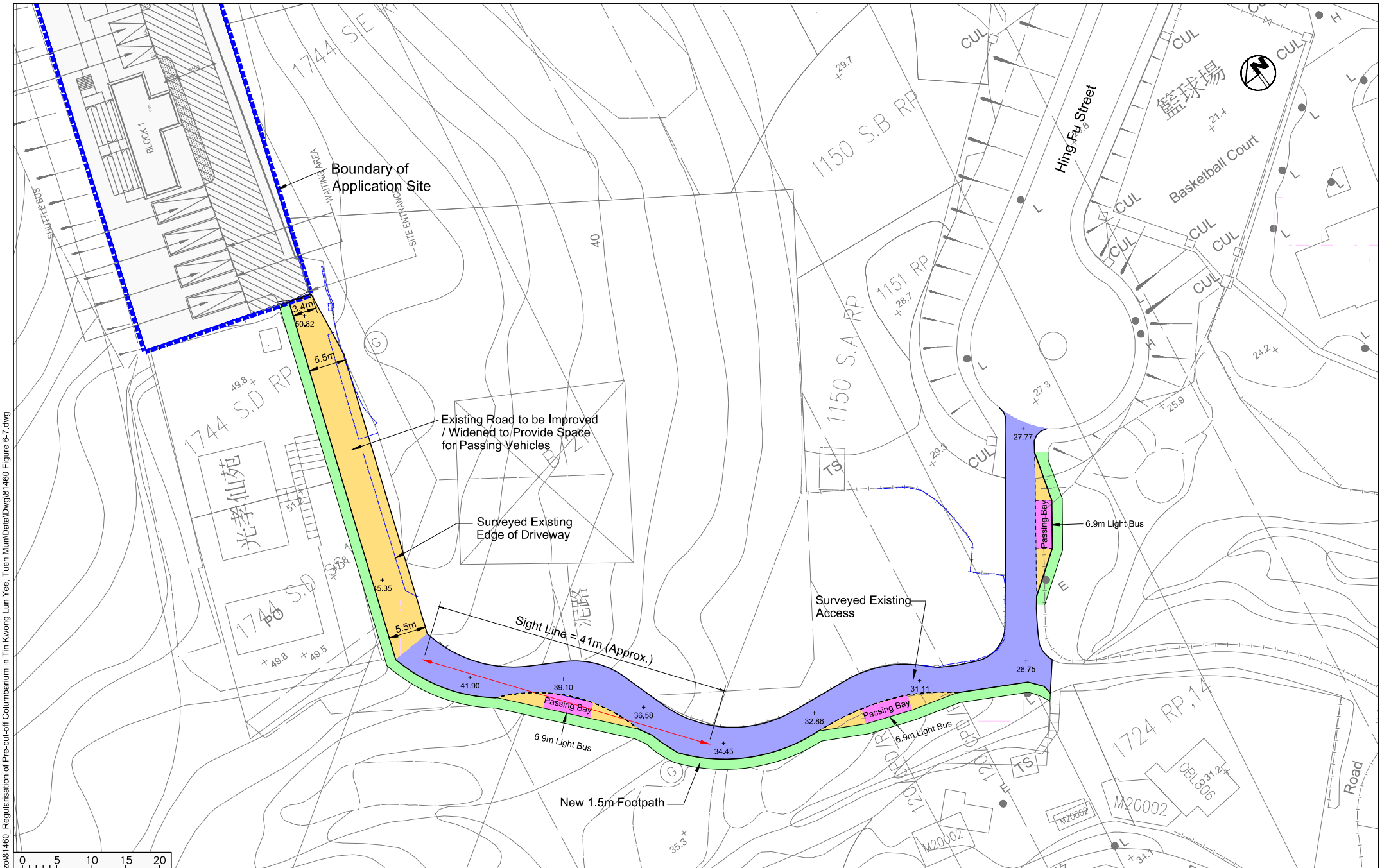
Yours faithfully,
Toco Planning Consultants Ltd.

TOCO PLANNING CONSULTANTS LTD.

Ted Chan
Managing Director

cc Client

TED T. C. CHAN
MPIA MHKIP RPP



OZZO TECHNOLOGY

Date 23/12/2020 | Scale 1:500

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Layout of Proposed Widening On Local Access Road and New Lay-By

天罡隆義

Project No. 81460 | Rev. -

Dwg No. Figure 6-7

\\192.168.1.99\public\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 6-7.dwg

TOCO PLANNING CONSULTANTS LTD.
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E-mail: tocoplanning@hotmail.com
Website: http://www.tocoplanning.com

達材都市規劃顧問有限公司

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

Your Ref.: TPB/Y/TM/23

Dear Sir/ Madam, 31 March, 2021

Section 12A Rezoning Application from "GB" to "G/IC"
for a Religious Institution and Columbarium in Tin Kwong Lun Yee,
Lot Nos. 1744A-C and 1744G-I in D.D. 132, Tuen Mun
(Application No.: Y/TM/23)

We refer to the email from District Planning Office/ Tuen Mun (DPO/TM) dated 25.3.2021.

In response to the queries from DPO/TM in relation to the presence of the religious symbols and religious facilities at the application site, the Applicant herein submits the following clarification in relation to the concerns of the Town Planning Board (the Board) :-

1. Component of the Religious and Columbarium use at the Application Site

(a) The Applicant confirms that the present application has always been for both religious and columbarium use. Lang Yan Sing Gau (能仁聖教) is a special branch of Tibetan Buddhism Vajrayana (藏傳佛教密宗). The religion mainly emphasises the religious spirit (宗教精神) and missionary works (傳教工作), especially in self-cultivation (個人修爲) and meditation. Master Yuen Sin Kan, Dharma name: Lun Yee the twenty-sixth (隆義二十六世), was enlightened by a vision of spreading Lang Yan Sing Gau in Hong Kong. He established the first Vajrayana temple at the application site and named it as Tin Kwong Lun Yee (天罡隆義), and the spirit and the promotion of the religion would have been kept on but, for the recent deadly plague, across the world.

(b) Different to the other traditional religions such as Buddhism, Lang Yan Sing Gau does not require a large formal temple structure(s) to carry out religious training and activities. It does not attract or call for large number of followers to be

TED T. C. CHAN
MPIA MHKIP RPP

present or carry out worshipping activities at the application site or anywhere else. In a low-profile fashion, Tin Kwong Lun Yee will, on regular session basis, provide training and teaching to a small group of students who have to realize the philosophical teaching in their daily life and to benefit all sentient beings. Their general practice in training and coaching activities will usually be carried out outdoor in a secluded area in a form of meditation (靜坐方式). Tin Kwong Lun Yee provides columbarium service which is in line with their religious principle to highly respect the value of life, and the open area may provide, and may have been so providing, the small gathering, but for the plague and government restriction and/or curfew currently in force.

It should be noted that the religious activities at the application site have been temporary suspended after the social unrest in June 2019 and subsequently the Covid-19 pandemic situation. Since the planning application has yet to be approved, the religious activities, which were previously carried out in Block 3 (信眾靈修研習處), had been on hold and hence keeping on the procedures regarding the application for columbarium and religious uses. After the forthcoming subsequent section 16 planning application, so approved if at all by the Board, the open lawn and multi function plaza as proposed in the Landscape Master Plan (see attached plan) will be used and resumed as the training and coaching area. Block 3 will be used as a back-up indoor area when bad weather occurs. More religious symbols will be provided within the buildings to achieve a balance between columbarium and religious uses in the implementation stage. Some previous site photos showing the religious symbols of Tin Kwong Lun Yee before its temporary suspension in 2019 are attached for your easy reference.

As a matter of religious principle, the sacred spirit (宗教精神) of Lang Yan Sing Gau and the religious lectures and training activities to be arranged regularly at the application site is superior than the function of columbarium use at the site. In fact, grave-sweeping activities would only be held mainly twice a year during Ching Ming and Chung Yeung Festival Periods or whereabouts. Therefore, the Applicant confirms that the religious institution has been and would still be the primary use of the application site in non-festival days. The "Tao Tong" (道堂) enlisted were and would be joining the activity or training in due course after the uplifting of restriction/curfew and the due approval (if at all) of Town Planning authority.

2. Religious Lecture/ Training

In future, Tin Kwong Lun Yee aims at providing religious lecture/ training once every Saturday and Sunday. Each lecture will not have more than 20 students. As part of the training programme, car parking space will not be provided on-site and all students will be encouraged to use public transportation to reach the application site. All the religious activities will be suspended during the grave sweeping periods. There is unlikely any traffic concern hence.

Religious lecture and training activities will be carried out at the proposed open lawn and multi function plaza and Block 3 would be used as a back-up area. In view of the religious activities are relatively quiet in nature, and the training areas are situated in a secluded location surrounded by the proposed trees, it would not generate adverse noise impact to the surrounding, nor would it bring about and crowd or any vehicle adversely affecting the traffic or pedestrian flow.

3. Insignificant Traffic Impact

Our traffic consultant has advised that the traffic impact of the religious activities is considered to be insignificant due to relatively small number of students visiting the application site per day (letter enclosed) as already happened and/or experienced by the Applicant or its predecessor-in-title. Thus, it would not affect the validity of the Traffic Impact Assessment submitted earlier.

In the subsequent section 16 planning application, which is forthcoming, the Applicant will submit an update Management Plan clearly setting out "all religious activities on-site that will be suspended during the grave sweeping periods".

Listed Tao Tong
"Tao Tong (道堂)"
(supervised by Chief Staff, CHAN Chi-man,
a Tao Master in practice of Taoism for over 30 years)

1. 藏霞精舍
2. 秀茂坪地藏古廟
3. 承德堂
4. 殷濟洲和平道堂
5. 謝奕仔道院

The Applicant will repair the Tao statues on site as approved by the Town Planning authority before the academic and practical Tao activities are resumed (from plague restriction).

We verily believe that the above clarification should adequately and satisfactorily addressed and disposed of the concerns of the District Planning Officer.

Yours faithfully,
Toco Planning Consultants Ltd.

Ted Chan
Managing Director

c.c. DPO/TM&YLW (Attn. Mr. Kent Lee),
Client, &
Messrs. Collin Ng & Co., Solicitors

LEGENDS

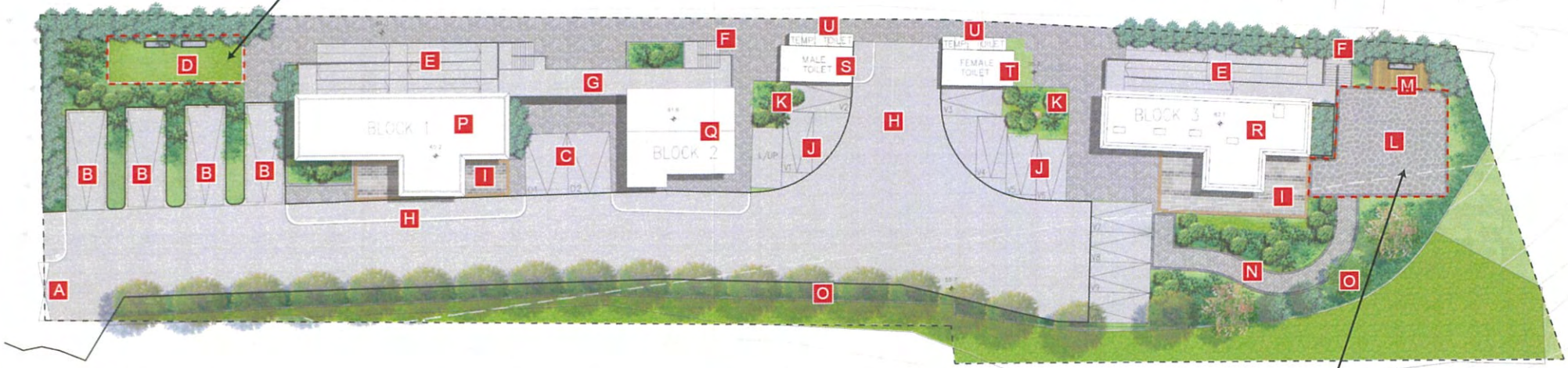
- Bamboo
- Shrub & Groundcover
- Lawn
- Buffering Trees
- Concrete Paving
- Conc. Block Paver
- Granite in Crazy Pattern
- Feature Paving Pattern
- Timber Deck





Reference Photos for Religious Lecture and Training

Religious Lecture/ Training Area



Religious Lecture/ Training Area

- A Application Site Entry
- B Shuttle Bus Bays
- C Carpark reserved for Visitor (Disabled)
- D Open Lawn Area
- E Access Ramp to Upper Level
- F Staircase to Upper Level
- G Upper Level Viewing Terrace
- H EVA WITH WHITE LINE MARKING
- I Feature Paving to Building Entry
- J Carpark reserved for Staff / Visitor
- K Leisure Garden
- L Multi function Plaza
- M Timber Deck (Leisure Area)
- N Pedestrian Path
- O Buffering Trees Row
- P Block 1 - Columbarium
- Q Block 2 - Columbarium and management office
- R Religious use and Columbarium
- S Male Toilet
- T Female Toilet
- U Temporary Toilets

Scale 1:200

TOCO

Plan 1: Religious Lecture and Training for Tin Kwong Lun Yee



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6

TOCO

Plan 2: Site Photos in the Past

30 March 2021
Our ref: 81460-20210330a
Your ref: TPB/Y/TM/23

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

Dear Sir/ Madam,

**Section 12A Rezoning Application from "GB" to "G/IC"
for a Religious Institution and Columbarium in Tin Kwong Lun Yee,
Lot Nos. 1744A-C and 1744G-I in D.D. 132, Tuen Mun
(Application No.: Y/TM/23)**

We refer to clarifications provided by Applicant regarding on the religious activities at the application site, it is noted that the religious – Lang Yan Sing Gau (能 仁 聖 教) is a low-profile religion which will not attract large number of followers to carry out worshipping activities at the site. Tin Kwong Lun Yee will only provide the religious lecture/training to a small group of members on Saturday and Sunday only. And, in future, all the religious activities will be suspended during the grave sweeping periods. In addition, car parking space will not be provided to students and they will be encouraged to use public transportation to reach the application site.

Based on the information and arrangements, it is expected that the traffic impact by the religious activities is considered to be insignificant due to the small number of students visiting the site on Saturday and Sunday, and no religious activities will be hold during the grave sweeping periods.

Besides, it should be noted that the religious activities at the site have been temporary suspended after the social unrest in June 2019 and subsequently the Covid-19 pandemic situation. On the other hand, the traffic impact assessments are based on the actual on-site surveys in Ching Ming Festival and a weekday in April 2019. The traffic impact induced from the religious activities has been considered as a kind of background traffic. In this regard, the said religious activities it would not affect the validity of the Traffic Impact Assessment submitted earlier.

OZZO Technology (HK) Ltd.
香港灣仔摩理臣山道4-6號經信商業大廈14樓 14/F., EIB Tower, Nos. 4-6 Morrison Hill Rd, Wanchai, HK
Tel: (852) 3488 5449 Fax: (852) 3020 0370 E-mail: info@ozzotec.com http://www.ozzotec.com

In the subsequent section 16 planning application, the Applicant will submit an update Management Plan by clearly stating “all religious activities on-site will be suspended during the grave sweeping periods”.

Yours faithfully,



Stanley Chan
Director

c.c. DPO/TM&YLW (Attn. Mr. Kent Lee)

OZZO Technology (HK) Ltd.
香港灣仔摩理臣山道4-6號經信商業大廈14樓 14/F., EIB Tower, Nos. 4-6 Morrison Hill Rd, Wanchai, HK
Tel: (852) 3488 5449 Fax: (852) 3020 0370 E-mail: info@ozzotec.com http://www.ozzotec.com

Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee at Lot Nos. 1744 S.A. – S. C. and 1744 S.F. – S.I. in D.D. 132, Tuen Mun New Territories

Traffic Impact Assessment Study
Final Study Report
February 2021

Ozzo Technology (HK) Ltd
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Wan Chai, Hong Kong
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http:// www.ozzotec.com

Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee at Lot Nos. 1744 S.A. – S. C. and 1744 S.F. – S.I. in D.D. 132, Tuen Mun New Territories

Traffic Impact Assessment Study
Final Study Report
February 2021

Contents Amendment Record

This report has been issued and amended as follows:

Revision	Description	Prepared/ Date	Checked/ Date	Approved / Date
0	Final Study Report	MM 19/05/2019	JL 22/05/2019	OC 27/05/2019
0b	Final Study Report	MM 24/06/2019	JL 24/06/2019	OC 25/06/2019
1	Final Study Report	MM 2/11/2019	JL 6/11/2019	OC 28/11/2019
2	Final Study Report	LL 2/12/2020	MM 16/12/2020	SC 16/12/2020
3	Final Study Report	LL 29/01/2020	MM 2/02/2021	SC 2/02/2021

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1 INTRODUCTION

1.1 Background

1.1.1 The Applicant applies for rezoning planning approval, from "GB" to "G/IC", for a religious institution and columbarium in Tin Kwong Lun Yee at Lot Nos. 1744S.A. – S.C. and 1744S.F. – S.I. in D.D. 132, Tuen Mun (hereafter referred as the "Application Site").

1.1.2 The Applicant intends to a pre-cut-off columbarium (hereafter referred as the "Proposed Development") with a total of 11,094 niches.

1.1.3 Ozzo Technology (HK) Limited has been commissioned to undertake a Traffic Impact Assessment (TIA) Study, to assess the traffic impact to be induced by the Proposed Development on the road network in the vicinity of the Application Site and to devise appropriate traffic and crowd management plan during grave sweeping festival periods.

1.2 Study Objectives

1.2.1 The objectives of the TIA study are as follows:

- To review the existing traffic situation of the surrounding road network during grave sweeping festival period;
- To estimate the traffic generations/attractions to be induced by the Proposed Development during grave sweeping festival periods;
- To assess the future traffic situation of the surrounding road network during grave sweeping festival periods;
- To appraise the potential traffic impact of the Proposed Development on the surrounding road network during grave sweeping festival periods;
- To recommend traffic and crowd management and control plans to be implemented during grave sweeping festival periods.

1.3 Report Structure

1.3.1 Following this introductory chapter, this report is arranged as follow:

- Chapter 2 summarizes the existing traffic condition in the vicinity of the Application Site during grave sweeping festival periods;
- Chapter 3 describes the Proposed Development;
- Chapter 4 provides the forecast traffic to be generated by the Proposed Development;
- Chapter 5 describes the proposed Crowd Management Plan to be implemented during peak grave sweeping festival days;
- Chapter 6 describes the traffic impact assessment approach and reports the assessment results; and
- a summary of the findings and conclusion of this TIA study are given in Chapter 7.

2 EXISTING TRAFFIC SITUATION

2.1 Site Location and Study Area

2.1.1 The Application Site is located at Lot Nos. 1744S.A. – S.C. and 1744S.F. – S.I. in D.D. 132, Tuen Mun as shown in **Figure 2-1**.

2.1.2 **Figure 2-2** shows the proposed Study Area for this TIA study. As shown in the figure, the Site can be accessed via a single-track access road which connects with Hing Fu Street near Kwong Shan Tsuen. Hing Fu Street is a local access road in single-2 lane standards. The road connects with Hing Kwai Street, a Local Distributor Road, for access to other parts of Tuen Mun District via Tsun Wen Road and Ming Kum Road, both are District Distributor Roads serving the developments in Tuen Mun North.

2.1.3 The proposed Study Area covers the key junctions and road links along the major vehicular routes to be used by the traffic to be induced by the Proposed Development.

2.2 Public Transport Services

2.2.1 **Figure 2-3** shows the existing public transport provisions in the vicinity of the Application Site with details of the public transport services summarized in **Table 2-1**.

Table 2-1 Existing Bus and GMB Services

Route No.	Terminating Points		Remarks
Franchised Bus Services			
58M	Leung King Estate	Kwai Fong Station	Daily services every 3-12 mins
58P	Kwai Fong Station	Tin King Estate	Mon to Sat at PM peak
58X	Leung King Estate	Mong Kok East Station	Daily services every 5-15 mins
258D	Po Tin	Lam Tin Station	Daily services every 6-20 mins
258S	Shan King Bus Terminus	Lam Tin Station	Mon to Sat at AM peak
258X	Po Tin	Kwun Tong Ferry	Mon to Fri at 7:35am and 6:05pm
260X	Po Tin	Hung Hom Station	Daily services every 6-15 mins
960	Kin Sang Bus Terminus	Wan Chai North	Daily services every 4-20 mins
960A	Central	Hung Shui Kiu (Hung Fuk Estate)	Mon to Fri at 6:30pm
960B	Quarry Bay	Hung Shui Kiu (Hung Fuk Estate)	Mon to Fri at PM peak
960X	Hung Shui Kiu (Hung Yuen Road)	Quarry Bay (King's Road)	Mon to Fri at AM peak
961P	Leung King Estate	HK Convention Centre	Mon to Fri at 7:35am
B3A	Shan King Estate	Shenzhen Bay Port	Daily services every 20-35 mins
E33P	Siu Hong Station	Airport (Ground Transportation Centre)	Daily services every 12-45 mins
K58	Fu Tai Estate	Castle Peak Bay Bus Terminus	Mon to Sat at AM and PM peak
Green Minibus Services			
40	Siu Hang Tsuen	Tuen Mun Town Centre	Daily services every 13 mins
44A	Tuen Mun Station	Sheung Shui Statoin	Daily services every 2-3 mins
44A1	Po Tin Estate	Sheung Shui Station	Mon to Sat every 20-25 mins
44B	Tuen Mun Station	Lok Ma Chau Public Transport Interchange	Daily services every 15 mins
Light Rail Route			
505	Sam Shing	Siu Hong	Daily services every 5-14 mins
507	Tuen Mun Ferry Pier	Tin King	Daily services every 5-15 mins
615	Tuen Mun Ferry Pier	Yuen Long	Daily services every 10-23 mins
615P	Tuen Mun Ferry Pier	Siu Hong	Daily services every 10-23 mins

2.3 Existing Traffic Conditions

2.3.1 To reveal the existing traffic conditions in the Study Area during the grave sweeping festival periods, traffic count surveys were undertaken at the key locations within the Study Area on Ching Ming Festival in 2019 (5th April 2019) and for both AM and PM peaks on a neutral weekday. The locations of the traffic surveys are shown in **Figure 2-4**.

2.3.2 All vehicular flows in the subsequent analysis are converted to passenger car unit (PCU) based on the PCU factors for signal and priority traffic according to Table 2.3.1.1 of Volume 2 of "Transport Planning and Design Manual" (TPDM) as shown in **Table 2-2**.

Table 2-2 Passenger Car Unit Conversion Factors

	PCU Conversion Factor	
	Traffic Signal	Priority
Car / Taxi	1.00	1.00
Public Light Bus / Minibus	1.50	1.50
Light Goods Vehicle	1.50	1.50
Medium/ Heavy Goods Vehicle	1.75	2.80
Bus / Coach	2.00	2.80

2.3.3 By applying the above PCU factors, the hourly vehicular traffic flows in PCUs are calculated and **Figure 2-5** shows the 2019 Ching Ming and Weekday Peak Hour Observed Flows.

2.3.4 Based on the observed peak hour traffic flows, the performances of the key junctions in the Study Area are assessed. The results are summarized in **Table 2-3** and detailed junction capacity calculation sheets are given in **Appendix A**.

2.3.5 For signal-controlled junctions, the reserve capacity index, R.C. is calculated based on current cycle time in accordance the methods stated in Chapter 2.4 of Volume 4 TPDM.

Table 2-3 2019 Peak Hour Junction Performance

Ref No.	Junction Location	Junction Type	Capacity Index (1)	2019 Ching Ming	2019 Weekday	
					AM	PM
J1	Hing Fu Street	Roundabout	DFC(1)	0.02	0.02	0.02
J2	Hing Kwai Street / Tong Hang Street / Hing Fu Street	Priority	DFC	0.07	0.32	0.10
J3	Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	Signal	R.C. (2)	100%+	92.9%	100%+
J4	Tsun Wen Road / San Fuk Road	Priority	DFC	0.03	0.02	0.01
J5	Tsun Wen Road / Leung Wan Street	Signal	R.C.	62.5%	53.6%	94.1%
J6	Tsing Lun Road / Tsun Wen Road	Signal	R.C.	91.6%	100%+	58.9%
J7	Tsing Lun Road / Tsing Chung Koon Road	Signal	R.C.	78.0%	68.9%	60.2%
J8	Tin King Road / Ming Kum Road	Signal	R.C.	100%+	62.9%	100%+
J9	Tsing Tin Road / Ming Kum Road	Signal	R.C.	100%+	68.5%	83%
J10	Tsing Lun Road / Access to Tuen Mun Hospital	Priority	DFC	0.37	0.12	0.10
J11	Lam Tei Interchange	Roundabout	DFC	0.25	0.41	0.34
J12	Tsing Lun Road / Hong Po Road	Roundabout	DFC	0.44	0.61	0.65

Notes: (1) DFC = Design Flow to Capacity ratio.
(2) R.C. = Reserve Capacity under Current cycle time

2.3.6 The results of the assessment shown in **Table 2-3** indicate that the reserve capacities (RC) of all signal-controlled junctions are greater than 15% and the design flow to capacity (DFC) ratio of all priority and roundabout junctions are less than 0.85, i.e. all the key junctions within the Study Area operate satisfactorily during the peak hour of 2019 Ching Ming Festival and a typical weekday.

2.3.7 The link performances of Hing Fu Street Study Area are also assessed, and the results are summarized in **Table 2-4** and **Table 2-5**.

Table 2-4 2019 Peak Hour Link Performance during Ching Ming Festival

Ref No.	Location	Direction	Design Capacity(1)	2019 Ching Ming Day		
				Flow (pcu/hr)	Flow (veh/hr)	P/Df(2)
L1	Hing Fu Street (Between Po Tin Estate and Cul-de-sac)	Westbound	400	10	9	0.02
		Eastbound	400	14	13	0.03
L2	Hing Fu Street (Between Po Tin Estate and Hing Kwai Stretet)	Westbound	400	32	32	0.08
		Eastbound	400	33	30	0.08

Notes: (1) Design Capacity of the Link according to TPDM:
Hing Fu Street (Local road with 7m 2-lane single carriageway) = 800 veh/hr (2-way)
(2) The Capacity Index for Road Links is Peak Hourly Flows/Design Flow Ratios (P/Df)

Table 2-5 2019 Peak Hour Link Performance during Weekday

Ref No.	Location	Direction	Design Capacity(1)	2019 Weekday					
				AM Peak			PM Peak		
				Flow (pcu/hr)	Flow (veh/hr)	P/Df(2)	Flow (pcu/hr)	Flow (veh/hr)	P/Df(2)
L1	Hing Fu Street (Between Po Tin Estate and Cul-de-sac)	Westbound	400	20	18	0.05	7	5	0.01
		Eastbound	400	8	8	0.02	10	10	0.03
L2	Hing Fu Street (Between Po Tin Estate and Hing Kwai Stretet)	Westbound	400	93	84	0.21	93	84	0.21
		Eastbound	400	150	135	0.34	52	46	0.12

Notes: (1) Design Capacity of the Link according to TPDM:
Hing Fu Street (Local road with 7m 2-lane single carriageway) = 800 veh/hr (2-way)
(2) The Capacity Index for Road Links is Peak Hourly Flows/Design Flow Ratios (P/Df)

2.3.8 The results of the link assessment shown in **Table 2-4** and **Table 2-5** indicate that, Hing Fu Street operate satisfactorily during the peak hour of 2019 Ching Ming Festival and a typical weekday.

2.4 Existing Pedestrian Conditions

2.4.1 Pedestrian count surveys were also undertaken at Hing Fu Street during Ching Ming Festival in 2019 (5th April 2019) and weekday. **Figure 2-6** shows the peak pedestrian flows with every 5-mins interval recorded during the survey. To provide conservative estimates, the level of services of the footpaths are assessed based on the peak 5-min pedestrian flows and the results are presented in **Table 2-4**. The descriptions of different Level of Services are given in **Appendix B**.

Table 2-6 Level of Services (LOS) of Concerned Footpaths on Hing Fu Street on Ching Ming Day and a Typical Weekday

Pedestrian Link(1)	Effective Width(2)	Peak 5-minute Flows 2019 Ching Ming/ (2019 Weekday AM) [2019 Weekday PM] (5)	PMM(3)	LOS(4)
P1	1.5	3 (21) [23]	0.40 (2.8) [3.07]	A (A) [A]
P2	1.5	1 (8) [9]	0.13 (1.07) [1.20]	A (A) [A]
P3	1	2 (2) [1]	0.40 (0.40) [0.20]	A (A) [A]

Notes: (1) Refers to Figure 2-6 for locations of pedestrian links
(2) Effective Width = Footway Width – 0.5m of shy zone
(3) PMM = Pedestrian flow per minute per meter
(4) Refer to Appendix B for descriptions of LOS
(5) The number in the bracket "()"and "[]" means pedestrians numbers on Weekday

2.4.2 As indicated in **Table 2-4**, the level of services for the footways on Hing Fu Street are satisfactory with a LOS value of A during the peak period on Ching Ming Day and a typical weekday.

3 THE PROPOSED DEVELOPMENT

3.1 The Proposed Development

3.1.1 **Figure 3-1** shows the master layout plan of the Proposed Development. It is proposed to provide a total of 11,094 niches within the columbarium.

3.1.2 **Figure 3-1** also shows the proposed provisions of internal transport facilities within the Application Site, which include 2 accessible car parking spaces and 10 private car parking spaces for staff/ visitors, and 4 loading/ unloading bays for the proposed shuttle bus services on weekday during the festival periods. Meanwhile, one space will be provided for car/taxi pick-up/drop-off activities on normal days.

3.1.3 The car parking spaces are available for staff / visitors only on normal days outside festival periods. They will be closed for parking, but open for car/taxi pick-up/drop-off activities on weekdays within festival periods.

3.1.4 Results of vehicle swept path assessments within the Proposed Development are presented in **Appendix C**.

3.1.5 Also, during grave sweeping festival periods, management staff will be stationed at key locations to assist pedestrians and motorists as appropriate. Detailed Crowd Management Plan will be discussed in Chapter 4.

4 CROWD MANAGEMENT PLAN

4.1 Opening Hours

4.1.1 The columbarium operates daily, including weekends and public holidays, EXCEPT Ching Ming and Chung Yeung Festival Days and the two Saturdays and two Sundays before and after the festival days. The operation hours are summarized and presented in **Table 4-1**

Table 4-1 Operation Hours of the Columbarium

Time Period	Operation Hours
Festival Period • Festival Day (Ching Ming / Chung Yeung Festival) • Two Saturdays and Two Sundays before the Festival day • Two Saturdays and Two Sundays after the Festival day	The Columbarium will be Closed (Total 9 days)
Festival Period – Weekdays (Monday – Friday)	08:00 – 17:00
Non-Festival Period – Daily (Monday – Sunday)	10:00 – 17:00

4.2 Admission Control

4.2.1 The Columbarium is a private property in which only niche owners and their family members with proofs of memberships are allowed to enter the Columbarium. The purchasers of the niches inside the Columbarium are members of the Columbarium. Other visitors will only be allowed to access the Columbarium when leaded and permitted by the staff of the Columbarium.

4.2.2 The Sale Agreement for the purchase of niche will include a set of House Rules. The House Rules are to regulate the conduct of the visitors in the use of the niches including the information on shuttle bus services, parking and traffic arrangement during Ching Ming and Chung Yeung Festival periods.

4.2.3 In addition, to minimize the traffic impact to the surroundings and the traffic noise impact to the schools nearby, the Applicant will limit the number of visitors accessing the Columbarium. The columbarium will be restricted to allow not more than 200 persons accessing the Columbarium every hour during weekdays within the festival period.

4.3 Visit by Appointment System on peak Grave Sweeping Days

4.3.1 To reduce the traffic impact to the vicinity, the columbarium will be closed on the peak Grave Sweeping Festival Days (i.e. Ching Ming and Chung Yeung Festival Day), and two Saturdays and two Sundays before and after the Festival day, on which the most number of visitors occur. The columbarium will be open only on weekdays during the festival periods, and Visit-By-Appointment system will be implemented to control the number of visitors entering the Columbarium.

4.3.2 Booking by telephone, SMS, WhatsApp and Email will be available for all members once the Visit-By-Appointment system is activated. Each member and their accompanies has to reserve a place via the Visit-By-Appointment system on a first-come first-serve basis prior to their visits to the Columbarium. Via the Visit-By-Appointment system, members will be informed of the following information:

- Visit date;
- Admission time (one-hour slot);
- Total nos. of visitors permitted during the visit;
- For visitors apply for shuttle bus services, shuttle bus permits which show the assigned pick-up time of shuttle bus services and location of pick up point will be given.

4.4 Proposed Shuttle Bus Services

4.4.1 To minimise the amount of vehicular traffic and in line with the Government Policy to encourage public transport use with railway as the backbone, the Applicant proposes to provide the following free shuttle bus services for visitors to the Proposed Development during grave sweeping festival periods (for 4 weeks' weekday during festival period):

- Destinations:

  The Proposed Development - MTR West Rail Siu Hong Station (North) general layby (Circular)

- Routeing (**Figure 4-1**):

  Bus bay inside the Proposed Development, Hing Fu Street, Hing Kwai Street, Ming Kum Road, Tsing Tin Road, Tuen Mun Road, Lam Tei Interchange, Siu Hong Station (North) general layby, Lam Tei Interchange, Tuen Mun Road, Tsing Tin Road, Ming Kum Road, Hing Kwai Street, Hing Fu Street, Bus bay inside the Proposed Development.

- Stopping Places for Pick Up/Set Down:

  1. Bus bay inside the Proposed Development (**Figure 3-1**)
  2. General lay-by at MTR West Rail Siu Hong Station (North) (**Figure 4-2**)

- Departure times/ Service Frequency:

  08:00 – 17:00 Every 7.5 min.

- Fares:

  Free of charge.

4.4.2 It is noted that illegal parking might appear at Hing Fu Street, which would affect the effectiveness of shuttle bus operations. As a result, staff by Applicant will patrol frequently to observe the traffic situation on Hing Fu Street. If serious illegal parking of vehicles takes place on Hing Fu Street during festive periods, the staff will take the initiative to inform the Police, who has right to exercise powers under the RTO, to take appropriate towing action to remove illegally parked vehicles on roads with a view to ensuring that Hing Fu Street is free for the traveling of shuttle buses, private cars and taxis.

4.5 Crowd Management within the Columbarium during peak Grave Sweeping Days

4.5.1 A total of 47 management staff/ security guards will be deployed and assigned to designated locations to regulate and manage the proposed columbarium area, ensuring the smooth operation of the crowd management plan.

4.5.2 The manpower deployment plan and corresponding major duties are summarized in **Table 4-1**.

Table 4-2 Manpower Deployment Plan during Peak Grave Sweeping Days

Location	No. of Management Staff	No. of Security Guards	Major Duties
At Admission Office	2	0	• Act as command center to ensure smooth operation of management plan. • Daily operational needs and First aid services
Main entrance of Tin Kwong Lun Yee	1	2	• Register and implement the admission control system. • Monitor and control for in-coming shuttle buses/ private car with disabled/ elderly.
Along the Local Access Road connecting the Columbarium and Hing Fu Street	2	4	• Assist and guide the vehicles and pedestrian to ensure road safety along access road.
Holding Area in front of the 3 Columbarium Blocks	3	6	• Regulate and manage the queueing of visitors and implement admission control of each columbarium block. • Register and give priority to visitors with advance E-booking.
At Shuttle Bus Bays	2	4	• Direct and give guidance for the shuttle buses parking activities, as well as passengers boarding and alighting activities. • Regulate and manage passengers queuing for shuttle bus services.
At Private Car Park Area	1	2	• Assist and direct the drivers to ensure vehicles parking are conducted in a safe condition.
Inside the columbarium blocks	0	6 (One at each hall)	• Monitor the worshipping activities to ensure clean environment. • Direct and guide the visitors coming and leaving the columbarium halls.
In front of the columbarium blocks	0	3 (One at each block)	• Monitor the visitors accessing the columbarium halls to ensure smooth pedestrian movement.
Behind the columbarium Blocks (Rear Platforms and ramps)	2	3	• Monitor and direct the leaving visitors to ensure smooth pedestrian movement.

Location	No. of Management Staff	No. of Security Guards	Major Duties
General Lay-by at West Rail Siu Hong Station	2	2	• Verify the validity of visitors. • Regulate and control visitors queuing for shuttle bus services
Total	15	32	

4.5.3 The management staff/ security guards will station at the assigned locations to assist members within the columbarium site to undertake the worship activities in a safe and orderly manner.

4.5.4 As shown in **Figure 4-2**, management staff/security guards will be assigned to station at the general lay-by in West Rail Siu Hong Station to regulate and control passenger queuing at the lay-by and only visitors with valid proof of booking confirmation could be allowed to use the free shuttle bus service.

4.5.5 In addition, sufficient signages, as shown in **Figure 4-3**, will be temporarily erected by Applicant to provide guidance to visitors from main public transport facilities to Application Site.

4.6 Vehicular Traffic Arrangement

4.6.1 The summarized traffic arrangement are tabulated in the following table:

Table 4-3 Traffic Arrangement of the Columbarium

Time Period	Arrangement
Festival Period • Festival Day (Ching Ming / Chung Yeung Festival) • Two Saturdays and Two Sundays before the Festival day • Two Saturdays and Two Sundays after the Festival day	• Columbarium Closed (Total 9 days)
Festival Period – Weekdays (Monday – Friday)	• No parking allowed within site; • Shuttle bus in operation • Loading/Unloading within site
Non-Festival Period – Daily (Monday – Sunday)	• Parking allowed within site; • No shuttle bus services • Loading/Unloading within site

5 ESTIMATED TRIP GENERATIONS BY PROPOSED DEVELOPMENT

5.1 Person Trip Generations during Festival Period

5.1.1 In order to estimate the amount of development traffic to be generated by the Proposed Development, references are made to the daily person trips observed at a private columbarium development at To Fung Shan in Tai Wai during 2018 Ching Ming Festival. Similar to the Proposed Development, the referenced columbarium is a private columbarium development situated at the upper level of a hilly terrain. During Ching Ming and Chung Yeung Festival periods, free shuttle bus services between MTR Tai Wai Station and the columbarium site are provided over the operation hours between 08:00 – 17:00 based on an Appointment System. Visitors are required to make an appointment and reserve a place for the shuttle bus service before their visit to the columbarium during peak grave sweeping festival days.

5.1.2 **Table 5-1** shows the amount of daily person trips entering and leaving the columbarium by different modes over the time period of 08:00 – 17:00 during 2018 Ching Ming Festival. Based on the observed trip rates, the amount of daily person trips by the Proposed Development are also estimated. It is anticipated that a daily demand of around 5,577 visitors is anticipated during the Ching Ming Day

Table 5-1 Observed and Forecast Daily Person Trips during Ching Ming Festival

	Shuttle Bus		Car/Taxi		Total	
	In	Out	In	Out	In	Out
Surveyed Columbarium with around 3,000 niches						
Observed Daily Visitor flows (persons/day)	1,467	1,493	41	2	1,508	1,495
Trip Rates (persons/niche/day)	0.4890	0.4977	0.0137	0.0007	0.5027	0.4983
Proposed Development with 11,094 niches						
Forecast Daily Visitor flows (persons/day)	-	-	-	-	**5,577**	5,529

5.1.3 As mentioned in Chapter 4, the columbarium will be restricted to allow not more than 200 persons accessing the Columbarium every hour during weekdays within the festival period. As shown in **Table 5-2**, each hour will be referred as one-hour sessions. The crowd will be controlled and limited to 200 visitors entering the columbarium in each hour session during the festival periods.

Table 5-2 Daily Visitor Profile with Visit-by-Appointment System during Weekdays within Festival Periods

Session	Time Period (One-Hour Session)	Number of Visitors	
		In	Out
1	0800 – 0900	200	200
2	0900 – 1000	200	200
3	1000 – 1100	200	200
4	1100 – 1200	200	200
5	1200 – 1300	200	200
6	1300 – 1400	200	200
7	1400 – 1500	200	200
8	1500 – 1600	200	200
9	1600 – 1700	200	200
	Daily Total	1,800	1,800

5.1.4 With implementation of crowd management by Applicant, an hourly limit of 200 visitors will be allowed to access the columbarium, i.e. 1,800 visitors per day, during festive periods. Thus, it is anticipated that the estimated daily demand on Ching Ming Day (i.e. 5,577 visitors) would be served in around 3 weekdays in festival period.

5.1.5 Nevertheless, as summarized in **Table 4-2**, the proposed festival period is referred as the period between two Saturdays/two Sundays before and after the Festival day, which involves 4 weeks (i.e. 20 weekdays). It is considered that the proposed special arrangement would be sufficient to cope with the daily demand on Ching Ming Festival day, and at the same time, allow buffering time to digest the peak demand during general festival period.

5.2 Estimated Person and Vehicle Trip Generations by Different Modes

5.2.1 As shown in **Table 5-1**, around 97.3% of the daily person trips use the free shuttle bus services for entering and leaving the surveyed columbarium in Tai Wai during Ching Ming Festival Day. Out of the remaining 2.7% of daily trips, only one car trip was recorded and all others are taxi trips.

5.2.2 Similar to the surveyed columbarium, the Applicant propose to provide free shuttle bus services by an Visit-by-Appointment System. It is also noted that, while there are only a few occupied niches at present, the existing visitors access the site by public transport as there is no free shuttle bus services at present. Taking into account the above factors, the following modal splits for visitors accessing the proposed development are assumed:

Mode	Percent
Shuttle Bus	95%
Car/Taxi	3%
Public Transport/Walk	2%
Total	100%

5.2.3 Based on the assumed modal splits, the amount of visitors by different modes are summarised in **Table 5-3**. The visitor flows are converted to vehicle flows based on the vehicle occupancy of respective modes as indicated in **Table 5-3**.

Table 5-3 Estimated Peak Hour Person and Vehicle Flows by Proposed Development

Mode	In			Out		
	Visitors/hour	veh/hour	PCU/hour	Visitors/hour	veh/hour	PCU/hour
Shuttle Bus(1)	190	8	12	190	8	12
Car/Taxi(2)	6	2	2	6	2	2
Public Transport /Walk	4	-	-	10	-	-
Total	**200**	**10**	**14**	**200**	**10**	**14**

Notes: (1) Based on 24-seat shuttle bus
(2) Based on average occupancy of 3.5 persons per vehicle.

5.2.4 As indicated in **Table 5-2**, it is estimated that the Proposed Development would general a total of 28 pcu's (14 in and 14 out) during the peak hour.

6 TRAFFIC IMPACT ASSESSMENT

6.1 Assessment Approach

6.1.1 It is anticipated that all the 11,094 niches within the Proposed Development would be fully occupied by 2025, hence, the assessment year for this traffic impact assessment study is set as 2028, which is 3 years from the year of full occupation.

6.1.2 Since the Proposed Development would not be opened on festival days and the weekend during the festival period, the peak day would be assumed to be occurred on a weekday during festival period. In this case, the traffic data collected during the peak hour on a typical weekday in 2019 are used as basis to derive the "Reference scenario" (i.e. without the Proposed Development) for comparison against the "Design scenario" (i.e. with the Proposed Development) for the assessment year of 2028 in order to identify the extent of the traffic impact to be induced by the Proposed Development.

6.1.3 The assessment approach is summarised below:

Step 1: 2019 Peak Hour Observed Flows (**Figure 2-5**)

Step 2: 2028 Peak Hour Background Flows = 2019 Peak Hour Observed Flows x Growth Factors (refer to Section 6)

Step 3: 2028 Peak Hour Reference Flows = 2028 Peak Hour Background Flows + additional development flows by Planned Developments (refer to Section 6)

Step 4: 2028 Peak Hour Design Flows = 2028 Peak Hour Reference Flows + additional development flows by the Proposed Development (refer to Section 6)

Step 5: The potential impact to be induced by the Proposed Development can be assessed by comparing the Design Flows against the Reference Flows (refer to Section 6).

6.2 2028 Peak Hour Background Flows

6.2.1 The historical trend of traffic conditions in the Study Area was reviewed based on the Annual Average Daily Traffic (AADT) extracted from the Annual Traffic Census (ATC) Reports published by Transport Department. **Table 6-1** shows the AADT recorded at the relevant stations in the Study Area and the percent changes from 2013 to 2018. On average, there was an increase of 0.86% per annum in the area over the 5-year period.

Table 6-1 Historical Traffic Data from Annual Traffic Census

Stn. No.	Road Name	Between		Average Annual Daily Traffic (AADT)						Growth (p.a.)
				2013	2014	2015	2016	2017	2018	
5688	Ming Kum Rd	Tin King Rd	Hing Kwai St	8,440	8,350	9,330	9,620	9,470	9,700	2.82%
				--	-1.07%	11.74%	3.11%	-1.56%	2.43%	
5490	Ming Kum Rd	Tin King Rd	Tsun Wen Rd	7,860	8,970	8,990	9,360	9,210	9,440	3.73%
				--	14.12%	0.22%	4.12%	-1.60%	2.50%	
5899	Tsun Wen Rd	Ming Kum Rd	Leung Tak St	6,700	6,630	6,570	6,360	5,740	5,890	-2.54%
				--	-1.04%	-0.90%	-3.20%	-9.75%	2.61%	
5699	Tsun Wen Rd	Leung Wan St	Leung Tak St	7,970	7,880	7,410	7,900	7,770	7,960	-0.03%
				--	-1.13%	-5.96%	6.61%	-1.65%	2.45%	
5504	Tsun Wen Rd	Tsing Lun Rd	Leung Wan St	11,840	10,510	10,940	11,390	11,220	11,490	-0.60%
				--	-11.23%	4.09%	4.11%	-1.49%	2.41%	
5452	Tsing Lun Rd	Tsun Wen Rd	Tsing Chung Koon Rd	6,690	6,530	5,680	5,920	5,830	5,970	-2.25%
				--	-2.39%	-13.02%	4.23%	-1.52%	2.40%	
5451	Tsun Wen Rd	Tsing Chung Koon	Tsing Chung Koon Rd	12,750	12,410	12,800	13,330	13,120	13,440	1.06%
				--	-2.67%	3.14%	4.14%	-1.58%	2.44%	
5647	Tsing Lun Rd	Tsing Chung Koon Rd	Lam Tei INT Rd	10,070	9,970	10,390	11,490	11,310	11,590	2.85%
				--	-0.99%	4.21%	10.59%	-1.57%	2.48%	
Total				**72,320**	**71,250**	**72,110**	**75,370**	**73,670**	**75,480**	**0.86%**
				--	**-1.48%**	**1.21%**	**4.52%**	**-2.26%**	**2.46%**	

Source: Annual Traffic Census published by Transport Department.

6.2.2 Reference is also made to the 2016-based Territorial Population and Employment Data Matrices (TPEDM) planning data published by Planning Department. **Table 6-2** presents the population and employment data in Tuen Mun District for 2016, 2021 and 2026. As indicated in the table, the population and employment places in Tuen Mun District are anticipated to increase by +1.48% over the period of 2019 - 2026.

Table 6-2 2016-Based TPEDM for Tuen Mun District

Category	2014	2019(1)	2021	2026	2019-2026 Average Growth (% p.a.)
Population	464,150	479,330	489,450	534,600	1.57%
Employment Places	126,300	129,930	132,350	140,550	1.13%
Total	590,450	609,260	621,800	675,150	1.48%

Source: 2016, 2021 & 2026 population and employment places are extracted from 2016-based TPEDM published by Planning Department.
Notes: (1) 2019 population and employment places are calculated by interpolation between 2016 – 2021

6.2.3 In view of the above, to provide conservative estimates, an average traffic growth rate of **+1.5%** per annum is assumed and applied to the 2019 Peak Hour Observed Flows on the road links in the Study Area to derive the 2028 Peak Hour Background Flows.

6.3 2028 Peak Hour Reference Flows

6.3.1 According to the published information from Town Planning Board, there are several planned housing developments in Tuen Mun under the Hong Kong Housing Authority. The locations of the planned housing developments are shown in **Figure 6-1**.

6.3.2 The additional peak hour traffic to be generated by the new housing developments are calculated based on peak hour trip rates from Transport Planning and Design Manual. To provide conservative estimates, the weekday AM peak hour trip rates which are generally higher than the trip rates on public holidays are adopted and the results are indicated in **Table 6-3**.

Table 6-3 Estimated Peak Hour Trip Generations by Planned Developments

Location	Land Use	Trip Generations (pcu/hr)			
		AM Peak		PM Peak	
		In	Out	In	Out
Site 1 and 1A, Tuen Mun Area 54, New Territories [A/TM/500] (3)	PRH (4,232 flats) (1)	138	183	127	100
	Retail (2,420 m² GFA) (1)	6	6	8	8
	Social Welfare Facilities (2) (1,060m² GFA)	1	1	1	1
	Kindergarten (1no.) (2)	10	10	10	10
Site 3 and 4 (East), Tuen Mun Area 54, New Territories [A/TM/499] (3)	PRH (5,183 flats) (1)	169	224	156	123
	Retail (3,130m² GFA) (1)	8	7	10	11
	Social Welfare Facilities (2) (1,810m² GFA)	1	1	1	1
	Kindergarten (1no.) (2)	10	10	10	10
Site 3 and 4 (West), Tuen Mun Area 54, New Territories (3)	Private Housing R(A) (1) (3,215 flats)	195	340	190	137
Site 4 (South), Tuen Mun Area 54, New Territories (3)	PRH (1,400 flats)	46	60	42	33
	Kindergarten (1no.) (2)	10	10	10	10
Site 5, Tuen Mun Area 54, New Territories (3)	SSF (1,000 flats) (1)	43	62	40	30
	Social Welfare Facilities (2) (1,300m² GFA)	1	1	1	1
Site 4A (East), Tuen Mun Area 54, New Territories (3)	Primary School (30-classroom) (2)	42	40	18	18
	Secondary School (2) (30-classroom)	26	19	3	8
Site 4A (West), Tuen Mun Area 54, New Territories (3)	Sport Centre & Community Hall (2)	12	14	11	10
Tuen Mun Area 29 West, Tuen Mun, New Territories [A/TM/547]	PRH (1,020 flats) (1)	33	44	31	24
	Residential Care Homes for the Elderly (2,100m² GFA) (2)	2	2	3	4
	Clinic/ Community Health Centre (13,000m² GFA) (2)	11	10	13	17
Total		**764**	**1044**	**685**	**556**

Notes: (1) AM and PM Peak Hour trip rates adopted with accord to TPDM Volume 1, Chapter 3, Annex D.

(2) Trip generations and attraction extracted from TIA reports of respective approved planning applications (A/TM/499, A/TM/500 and A/TM/547).

(3) The traffic impact assessment for Tuen Mun Area 54 development is undertaken by Civil Engineering and Development Department (Agreement No.CE38/2011(CE)) in 2011, and was review and updated by Hong Kong Housing Authority for planning application A/TM/499 and A/TM/500 with increase of plot ratio.

6.3.3 In addition, according to the published information from Town Planning Board, there are three other proposed columbarium developments near the Application Site, which their locations are also shown in **Figure 6-1**. With reference to the management measures stated in respective planning application, the amount of visitor to be attracted and generated by the development during peak hour during Ching Ming Festival are extracted and shown in **Table 6-4**.

6.3.4 Though shuttle bus services were also proposed in other applications, which the vehicular trips in the area could be reduced, the management plans proposed by other Applicant were not yet approved by government authorities. Thus, for conservative estimates, the vehicular trip generations by other proposed columbaria are estimated under no shuttle bus circumstances.

6.3.5 In addition, reference was made with the recently approved columbarium -- Filial Park in Tsing Shan Tsuen, Tuen Mun. Filial Park sits on a location where is well served by LRT service and public transports with about 470m walking distance and no shuttle bus services provided. The modal split assumptions (i.e. 56% of visitors by car/taxi) is adopted for estimation of the peak hour traffic generation of the other planned columbaria during Ching Ming Festival and the results are shown in **Table 6-4**.

Table 6-4 Estimated Peak Hour Trip Generations by Planned Columbaria during Ching Ming Festival

Location	No. of Niches	Ching Ming Festival Day			
		Peak Hour Person Trips(1)		Peak Hour Vehicle Trips (PCUs)(2)	
		In	Out	In	Out
[Y/TM/24] 光孝仙苑 Lots 1744 S.D ss.1 (Part) and 1744 S.D RP (Part) in D.D. 132, Hing Fu Street, Tuen Mun, New Territories	5,670	190	190	30	30
[Y/TM/25] 祥隆精舍 Lot 1724 RP ss.14 in D.D. 132, Hing Fu Street, Tuen Mun, New Territories	5,418	112	112	18	18
[Y/TM/26] 益豐精舍 Lots 1724 S.H RP and 2015 in D.D. 132, Hing Fu Street, Tuen Mun, New Territories	4,942	112	112	18	18

Notes: (1) Reference was made from respective planning applications.
(2) Based on 56% of visitors by car/taxi with average occupancy of 3.5 persons per vehicle; The modal split data of Filial Park was referred to the TIA report of its approved TPB Application [A/TM/527]

6.3.6 On the other hand, it should be noted that the peak hour trip generations for other columbaria in b are estimated during Ching Ming Festival while the proposed columbarium at Application Site is closed. As a result, reference was made on the traffic generation patterns with existing columbarium – Ching Chung Sin Yuen located in Tuen Mun during the festival period. The results are shown in **Table 6-5**.

Table 6-5 Observed Peak Hour Trip Generations at Ching Chung Sin Yuen during Festival Period

Day	Peak Hour Person Trips (Visitor/hour)			Trip Generation Rates (Visitor/hour/ niche)			Percentage Difference(1)
	In	Out	2-Way	In	Out	2-Way	
2015/4/5 (Ching Ming Festival)	5,934	4,861	10,795	0.061	0.050	0.110	--
2015/4/6 (Monday, Public Holiday)	3,281	2,768	6,049	0.033	0.028	0.062	-44%
2015/4/11 (Saturday)	1,237	993	2,230	0.013	0.010	0.023	**-79%**

Notes: (1) Percentage Difference is calculated by the observed trips during over observed trips during Ching Ming Festival.

6.3.7 As shown in **Table 6-5**, it is observed that the peak demand was appeared during Ching Ming Festival. The demand on Saturday and Sunday during festival period were significantly lower than the demand during Ching Ming Festival, about 44% and 79% lower than the observed demand on festive day.

6.3.8 It is noted that, generally, more visitors would be available for grave sweeping on Public holiday. Also, it should be noted that the actual visitor demand on working days (i.e. weekdays) would be further lower than the demand on Ching Ming Festival compared with Saturday and Sunday. However, for conservative estimates, reference is made on the difference between the trip generations on Ching Ming Festival and the Saturday within festival period.

6.3.9 As a result, by comparing the trips on Saturday Ching Ming Festival, a reduction factor of -79% is applied to the peak hour trip generations by planned columbaria during Ching Ming Festival. The estimated peak hour trip generations by other planned columbaria on weekdays during festival period are thus calculated and presented in **Table 6-6**.

Table 6-6 Estimated Peak Hour Trip Generations by Planned Columbaria on Weekdays during Festival Period

Location	No. of Niches	Weekdays during Festival Period			
		Peak Hour Person Trips(1)		Peak Hour Vehicle Trips (PCUs)(2)	
		In	Out	In	Out
[Y/TM/24] 光孝仙苑 Lots 1744 S.D ss.1 (Part) and 1744 S.D RP (Part) in D.D. 132, Hing Fu Street, Tuen Mun, New Territories	5,670	40	40	6	6
[Y/TM/25] 祥隆精舍 Lot 1724 RP ss.14 in D.D. 132, Hing Fu Street, Tuen Mun, New Territories	5,418	24	24	4	4
[Y/TM/26] 益豐精舍 Lots 1724 S.H RP and 2015 in D.D. 132, Hing Fu Street, Tuen Mun, New Territories	4,942	24	24	4	4

6.3.10 The additional development trips by the planned developments are then added to the 2028 Peak Hour Background Flows to derive the 2028 Peak Hour Reference Flows (i.e. without the proposed development) and the results are shown in **Figure 6-2**.

6.4 2028 Peak Hour Design Flows

6.4.1 Shuttle bus traffic are assigned according to the proposed bus routeing to and from West Rail Siu Hong Station as indicated in **Figure 4-1, Figure 6-3** shows the assignment of development traffic on the road network in the Study Area during the peak hour of grave sweeping festivals. By adding the peak hour development flows (**Figure 6-3**) to the forecast 2028 Peak Hour Reference Flows (**Figure 6-2**), the 2028 Peak Hour Design Flows (i.e. with Proposed Development) are derived and shown in **Figure 6-4**.

6.4.2 Based on the 2028 Peak Hour Reference and Design flows, the performance of the key junctions in the vicinity of the Study Area are assessed. The results are summarized in **Table 6-7** and detailed calculation sheets are given in **Appendix D**.

Table 6-7 2028 Weekday Peak Hour Performance of Key Junctions

Ref No.	Junction Location	Junction Type	Capacity Index (1)	2028 Reference		2028 Design	
				AM	PM	AM	PM
J1	Hing Fu Street	Roundabout	DFC(1)	0.05	0.04	0.07	0.07
J2(3)	Hing Kwai Street / Tong Hang Street / Hing Fu Street	Signal	R.C. (2)	69.6%	129.7%	64.3%	120.1%
J3	Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	Signal	R.C. (2)	45.4%	80.1%	44.8%	83.5%
J4	Tsun Wen Road / San Fuk Road	Priority	DFC	0.02	0.01	0.02	0.01
J5	Tsun Wen Road / Leung Wan Street	Signal	R.C.	17.9% (20.6%)(4)	54.7% (58.2%)(4)	17.9% (20.6%)(4)	54.7% (58.2%)(4)
J6	Tsing Lun Road / Tsun Wen Road	Signal	R.C.	25.1%	19.1%	25.1%	19.1%
J7	Tsing Lun Road / Tsing Chung Koon Road	Signal	R.C.	15.1% (26.6%)(5)	26.6% (39.2%)(5)	15.1% (26.6%)(5)	26.6% (39.2%)(5)
J8	Tin King Road / Ming Kum Road	Signal	R.C.	19.3% (25.5%)(5)	44.7% (52.3%)(5)	17.7% (23.8%)(5)	42.4% (49.8%)(5)
J9	Tsing Tin Road / Ming Kum Road	Signal	R.C.	40.2%	50.5%	40.2%	50.5%
J10	Tsing Lun Road / Access to Tuen Mun Hospital	Priority	DFC	0.23	0.14	0.23	0.14
J11(3)	Lam Tei Interchange	Roundabout	DFC	0.45	0.52	0.45	0.52
J12	Tsing Lun Road / Hong Po Road	Roundabout	DFC	0.81	0.78	0.81	0.79

Notes: *(1) DFC = Design Flow to Capacity ratio.*
(2) R.C. = Reserve Capacity under Current cycle time
(3) Based on the updated junction improvement and road layouts proposed in traffic impact assessment for Tuen Mun Area 54 development under approved planning application A/TM/499 and A/TM/500.
(4) The junction performance of J5 would be improved with improvement scheme by increasing of cycle time to 125 seconds
(5) The junction performance of J7 and J8 would be improved with improvement scheme by increasing of cycle time to 120 seconds

6.4.3 As shown in **Table 6-7**, all the key junctions in the Study Area would perform satisfactorily for both the Reference Scenario (i.e. without proposed columbarium) and Design Scenario (i.e. with proposed columbarium).

6.4.4 Nevertheless, it is noted that the junction performance of J5 and J7 would become marginal in future year of 2028, even without the Application Site. However, the junction performance could be further improved by increasing the cycle time to 125 seconds for J5 and 120 seconds for J7 to accommodate all the traffic generated by existing, approved and planned columbaria and Proposed Columbarium.

6.4.5 In addition, as shown in Table 6-7, the junction performance of J8 would become marginal after the operation of the Application Site, which however, the junction performance could also be improved by increasing the cycle time to 120 seconds to accommodate all the traffic generated by existing, approved and planned columbaria and Proposed Columbarium.

6.4.6 Similarly, based on the 2028 peak hour Reference and Design traffic flows, the peak hour link performance of Hing Fu Street on weekday are assessed. The results are summarized in **Table 6-8**.

Table 6-8 2028 Weekday Peak Hour Link Performance at Hing Fu Street

Ref No.	Location	Direction	Design Capacity	2028 Reference				2028 Design			
				AM Peak		PM Peak		AM Peak		PM Peak	
				Flow (veh/hr)	P/Df	Flow (veh/hr)	P/Df	Flow (veh/hr)	P/Df	Flow (veh/hr)	P/Df
L1	Hing Fu Street (Between Po Tin Estate and Cul-de-sac)	Westbound	400	34	0.08	19	0.05	44	0.11	29	0.07
		Eastbound	400	22	0.06	25	0.06	32	0.08	35	0.09
L2	Hing Fu Street (Between Po Tin Estate and Hing Kwai Stretet)	Westbound	400	109	0.27	109	0.27	119	0.30	119	0.30
		Eastbound	400	168	0.42	66	0.16	178	0.44	76	0.19

Notes: (1) Design Capacity of the Link according to TPDM:
Hing Fu Street (Local road with 7m 2-lane single carriageway) = 800 veh/hr (2-way)
(2) The Capacity Index for Road Links is Peak Hourly Flows/Design Flow Ratios (P/Df)

6.4.2 The results of the link assessment shown in **Table 6-8** indicate that, Hing Fu Street would perform satisfactorily for Design Scenario.

6.5 Pedestrian Impact Assessment

6.5.1 LOS assessments are undertaken for the major pedestrian links for the 2028 Design scenario (i.e. with the proposed columbarium)

6.5.2 Visitors are assigned to the major desire pedestrian routes, as shown in **Figure 6-5**, in the study area taking into account the locations of LRT stops and bus terminus. The 2028 design pedestrian flows are shown in **Figure 6-6**, the assessment results on the Level of Services are presented in **Table 6-9**.

Table 6-9 Level of Services (LOS) of Concerned Footpaths on Hing Fu Street

Pedestrian Link(1)	Effective Width(2)	Peak 5-minute Flows (2028 Weekday AM) [2028 Weekday PM]	PMM(3)	LOS(4)
P1	1.5	(31) [33]	(4.13) [4.40]	(A) [A]
P2	1.5	(18) [19]	(2.40) [1.73]	(A) [A]
P3	1	(12) [11]	(2.40) [2.20]	(A) [A]

Notes: (1) Refers to Figure 2-6 for locations of pedestrian links
(2) Effective Width = Footway Width – 0.5m of shy zone
(3) PMM = Pedestrian flow per minute per meter
(4) Refer to Appendix B for descriptions of LOS

6.5.3 The results indicate that the concerned footways affected by the proposed columbarium development would perform satisfactorily with a LOS of A during the peak period in the design year of 2028.

6.6 Sensitivity Test

6.6.1 Sensitivity test has been carried out in case less visitors use the shuttle bus services. By increasing the percentage of visitors using Car/Taxi from 3% to 38%, and lowering the percentage of the visitors using the shuttle bus from 95% to 60%, the trips are tabulated in in **Table 6-10**.

Table 6-10 Estimated Peak Hour Person and Vehicle Flows by Proposed Development – Sensitivity Scenario 1

Mode	Ratio	In			Out		
		Visitors/hour	veh/hour	PCU/hour	Visitors/hour	veh/hour	PCU/hour
Shuttle Bus(1)	60%	120	5	8	120	5	8
Car/Taxi(2)	38%	76	22	22	76	22	22
Public Transport /Walk	2%	4	-	-	10	-	-
Total	**100%**	**200**	**27**	**30**	**200**	**27**	**30**

Notes: (1) Based on 24-seat shuttle bus
(2) Based on average occupancy of 3.5 persons per vehicle.

6.6.2 The performances of the key junctions in the vicinity of the Study Area are then assessed, and the results are summarized in **Table 6-11**. The detailed junction capacity calculation sheets are given in **Appendix E**.

Table 6-11 2028 Peak Hour Performance of Key Junctions – Sensitivity Scenario 1

Ref No.	Junction Location	Junction Type	Capacity Index (1)	2028 Design	
				AM	PM
J1	Hing Fu Street	Roundabout	DFC(1)	0.09	0.10
J2(3)	Hing Kwai Street / Tong Hang Street / Hing Fu Street	Signal	R.C. (2)	58.6%	110.1%
J3	Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	Signal	R.C. (2)	43.3%	79.2%
J4	Tsun Wen Road / San Fuk Road	Priority	DFC	0.02	0.01
J5	Tsun Wen Road / Leung Wan Street	Signal	R.C.	17.5% (20.1%)(4)	54% (57.4%)(4)
J6	Tsing Lun Road / Tsun Wen Road	Signal	R.C.	24.5%	18.5%
J7	Tsing Lun Road / Tsing Chung Koon Road	Signal	R.C.	15.1% (26.6%)(5)	26.6% (39.2%)(5)
J8	Tin King Road / Ming Kum Road	Signal	R.C.	16.7% (22.8%)(5)	40.9% (48.2%)(5)
J9	Tsing Tin Road / Ming Kum Road	Signal	R.C.	39.5%	49.7%
J10	Tsing Lun Road / Access to Tuen Mun Hospital	Priority	DFC	0.23	0.14
J11(3)	Lam Tei Interchange	Roundabout	DFC	0.45	0.52
J12	Tsing Lun Road / Hong Po Road	Roundabout	DFC	0.81	0.79

Notes: (1) DFC = Design Flow to Capacity ratio.
(2) R.C. = Reserve Capacity under Current cycle time
(3) Based on the updated junction improvement and road layouts proposed in traffic impact assessment for Tuen Mun Area 54 development under approved planning application A/TM/499 and A/TM/500.
(4) The junction performance of J5 would be improved with improvement scheme by increasing of cycle time to 125 seconds
(5) The junction performance of J7 and J8 would be improved with improvement scheme by increasing of cycle time to 120 seconds

6.6.3 As shown in **Table 6-11**, all the key junctions in the Study Area would perform satisfactorily, except junction J8, which would become marginal after the operation of the Application Site. However, the junction performance could be improved by increasing the cycle time to 120 seconds to accommodate all the traffic generated by existing, approved and planned columbaria and Proposed Columbarium.

6.6.2 Further, the peak hour performance of Hing Fu Street is also assessed. And, the results, shown in **Table 6-12**, indicate that, Hing Fu Street would perform satisfactorily in the sensitivity scenario.

Table 6-12 2028 Weekday Peak Hour Link Performance at Hing Fu Street – Sensitivity Scenario 1

Ref No.	Location	Direction	Design Capacity	2028 Design			
				AM Peak		PM Peak	
				Flow (veh/hr)	P/Df	Flow (veh/hr)	P/Df
L1	Hing Fu Street (Between Po Tin Estate and Cul-de-sac)	Westbound	400	61	0.15	46	0.11
		Eastbound	400	49	0.12	52	0.13
L2	Hing Fu Street (Between Po Tin Estate and Hing Kwai Stretet)	Westbound	400	136	0.34	136	0.34
		Eastbound	400	195	0.49	93	0.23

Notes: (1) Design Capacity of the Link according to TPDM:
Hing Fu Street (Local road with 7m 2-lane single carriageway) = 800 veh/hr (2-way)
(2) The Capacity Index for Road Links is Peak Hourly Flows/Design Flow Ratios (P/Df)

6.6.1 On the other hand, sensitivity test is carried out with another scenario by considering that less visitors using shuttle bus services but using public transport instead for their visits.(i.e. increase the percentage of visitors using public transport from 2% to 37%, and lower the percentage of the visitors using the shuttle bus from 95% to 60%). The number of trips by diffident modal are then calculated and presented in **Table 6-13**.

Table 6-13 Estimated Peak Hour Person and Vehicle Flows by Proposed Development – Sensitivity Scenario 2

Mode	Ratio	In			Out		
		Visitors/hour	veh/hour	PCU/hour	Visitors/hour	veh/hour	PCU/hour
Shuttle Bus(1)	60%	120	5	8	120	5	8
Car/Taxi(2)	3%	6	2	2	6	2	2
Public Transport /Walk	37%	74	-	-	185	-	-
Total	**100%**	**200**	**7**	**10**	**200**	**7**	**10**

Notes: (1) Based on 24-seat shuttle bus
(2) Based on average occupancy of 3.5 persons per vehicle.

6.6.2 As indicated in **Table 6-13**, less vehicular traffic will be generated by the Application Site. On the contrary, there will be more visitors walking between major public transport facilities the Application Site. Thus, level of service on the major pedestrian road link are assessed.

6.6.3 Visitors are assigned to the major desire pedestrian routes, as shown in **Figure 6-5** and the results are presented in **Table 6-14**.

Table 6-14 Level of Services (LOS) of Concerned Footpaths on Hing Fu Street Sensitivity Test

Pedestrian Link(1)	Effective Width(2)	Peak 5-minute Flows (2028 Weekday AM) [2028 Weekday PM]	PMM(3)	LOS(4)
P1	1.5	(43) [45]	(5.73) [6.00]	(A) [A]
P2	1.5	(30) [31]	(4.00) [4.13]	(A) [A]
P3	1	(24) [23]	(4.80) [4.60]	(A) [A]

Notes: (1) Refers to Figure 2-6 for locations of pedestrian links
(2) Effective Width = Footway Width – 0.5m of shy zone
(3) PMM = Pedestrian flow per minute per meter
(4) Refer to Appendix B for descriptions of LOS

6.6.4 As shown in the **Table 6-14**, the level of services for the footways on Hing Fu Street are satisfactory with a LOS value of A during the peak period on a typical weekday.

6.7 Proposed Access Road Improvement

6.7.1 In order to minimized the safety risk on the concern of co-existence of pedestrian and vehicles on the access road leading to the Application Site, it is proposed to widen the road to provide a 1.5m wide footpath and two passing bays along the road as shown in **Figure 6-7.**

7 Summary and Conclusion

7.1 Summary of Findings

7.1.1 The Applicant applies for planning approval for a religious institution and columbarium in Tin Kwong Lun Yee (The Proposed Development) at Lots Nos. 1744 S.A. – S.C. and 1744 S.F. – S.I. in D.D. 132 in Tuen Mun. The columbarium within the Proposed Development will provide a total of 11,904 niches. Ozzo Technology (HK) Limited are commissioned to undertake a Traffic Impact Assessment (TIA) Study to assess the potential traffic impact to be induced by the Proposed Development.

7.1.2 The assessment year is set as 2028, i.e. 3 years from the full occupation of the niches by 2025.

7.1.3 Since the Proposed Development would not be opened on festival days and the weekend during the festival period, the peak day would be assumed to be occurred on a weekday during festival period.

7.1.4 In order to minimise the amount of vehicular traffic in the area, as well as traffic noise impact to the school nearby, and to encourage use of public transport, the Applicant proposes to provide free shuttle bus services for visitors between the Proposed Development and West Rail Siu Hong Station (North). Also, a maximum of 200 visitors per hour would be allowed to access the proposed columbarium and visitors are required to make appointment via Visit-by-Appointment system before their visits.

7.1.5 It is estimated that around 28 pcu's (14 in and 14 out) are to be induced by the Proposed Development during the peak hour during the weekday of the festival period.

7.1.6 The 2028 Peak Hour Reference Traffic Flows (i.e. without the proposed columbarium) are estimated taking into account the planned and committed developments, as well as the future population and employment in Tuen Mun.

7.1.7 The additional traffic to be induced by the Proposed Development is added to the 2028 Reference Flows to obtain the 2028 Design Flows (i.e. with the proposed columbarium).

7.1.8 Junction capacity assessments are carried out for all the key junctions within the Study Area. The results indicated that the key junctions and links in the area would perform satisfactorily in the design year of 2028 even with the proposed columbarium. The traffic impact to be induced by the proposed columbarium would be acceptable without creating adverse impact on the nearby road network.

7.1.9 To minimized the safety concern of co-existence of pedestrian and vehicles on the access road leading to the Application Site, the Applicant proposed to widen the road to provide a 1.5m wide footpath and two passing bays along the road.

7.2 Conclusion

7.2.1 The results of the assessment indicate that, with the provision of free shuttle bus services to be provided by the Applicant, the amount of traffic to be induced by the Proposed Development would be small and hence the potential traffic impact to be induced by the proposed columbarium would not pose adverse traffic impacts to the road network in the vicinity of the Application Site.

Figures

Application Site

Po Leung Kuk Horizon East Primary School

Po Tin Estate

Hing Kwai Street

Hing Fu Street

Yan Po Road

Tsun Wen Road

Ming Kum Road

0 20 40 60 80

LEGEND:

Application Site

OZZO TECHNOLOGY

Date 22/05/2019

Scale 1:2000

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Site Location

天罡隆義

Project No. 81460

Dwg No. Figure 2-1

Rev. A

X:\OZZO\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 2-1A.dwg



X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 2-2A.dwg

OZZO TECHNOLOGY

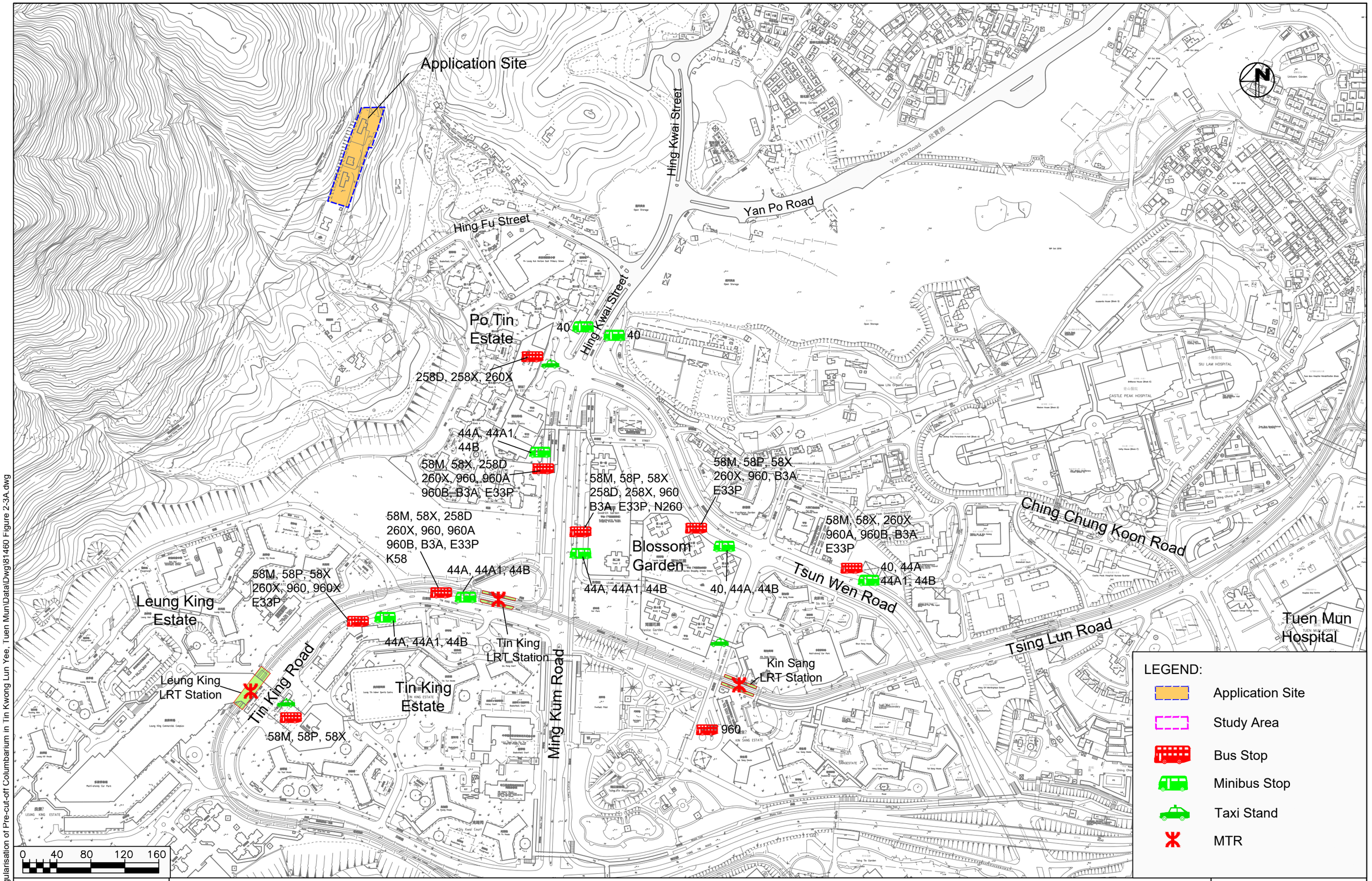
Date	Scale
22/05/2019	1:6000

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Study Area

天罡隆義

Project No. 81460	Rev. A
Dwg No. Figure 2-2	



X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 2-3A.dwg

OZZO TECHNOLOGY

Date	Scale
22/05/2019	1:4000

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Existing Public Transport Inventory

天罡隆義

Project No.	81460	Rev.
Dwg No.	Figure 2-3	A

Application Site

J1
J2
J3
J4
J5
J6
J7
J8
J9
J10
J11
J12

Hing Fu Street
Hing Kwai Street
Hing Kwai Street
Yan Po Road
Po Tin Estate
Ming Kum Road
Tsing Lun ROAD
SIU HONG STATION
Lam Tei Interchange
Tat Ling Divisional Police Station
Blossom Garden
Ching Chung Koon Road
Tuen Mun Hospital
Tuen Mun Road
Tsun Wen Road
Tin King Road
Leung King Estate
Tin King Estate
Tsing Lun Road
Tsing Tin Road

N

0 60 120 180 240

LEGEND:

- Applicaton Site
- Study Area
- MTR
- J3 Surveyed Junction

OZZO TECHNOLOGY

Date 22/05/2019

Scale 1:6000

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Location of Surveyed Key Junctions

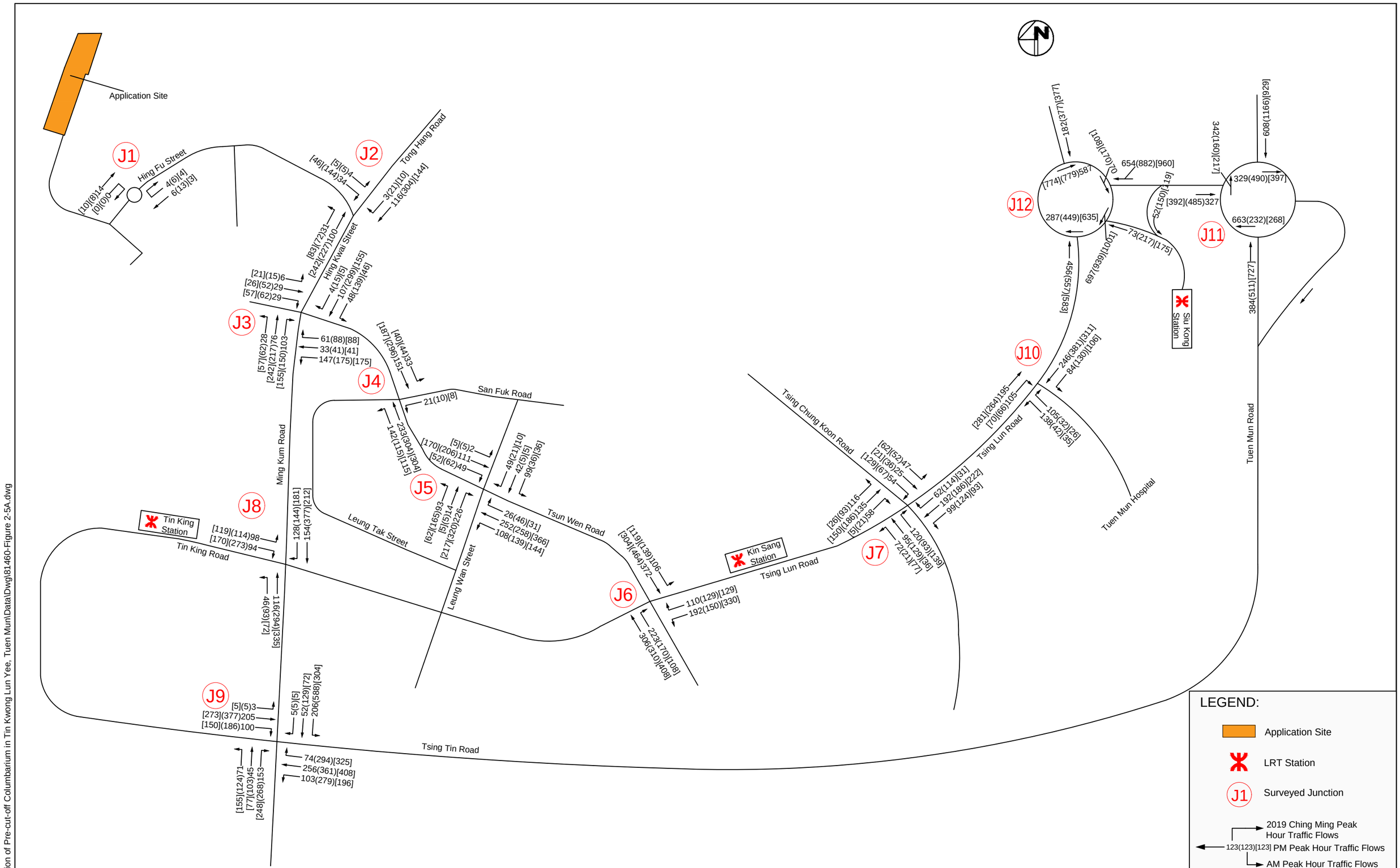
天罡隆義

Project No. 81460

Dwg No. Figure 2-4

Rev. A

X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 2-4A.dwg



LEGEND:

- Application Site
- LRT Station
- J1 Surveyed Junction
- 2019 Ching Ming Peak Hour Traffic Flows
- 123(123)[123] PM Peak Hour Traffic Flows
- AM Peak Hour Traffic Flows

Note: Traffic Flows at Junction in PCU values
Minor Road not shown for Clarity

OZZO TECHNOLOGY

Date 22/12/2020 | Scale NTS

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

2019 Ching Ming and Weekday Observed Peak Hour Traffic Flows

天罡隆義

Project No. 81460 | Rev. A

Dwg No. Figure 2-5

X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460-Figure 2-5A.dwg

Application Site

Hing Fu Street

3(21)[23]

P1

1(8)[9]

P2

2(2)[1]

P3

Po Tin Estate

Po Tin Bus Terminus

LEGEND:

Ching Ming Peak Pedestrian Flows

123(123)[123] Weekday PM Peak Pedestrian Flow

Weekday AM Peak Pedestrian Flow

0 10 20 30 40

OZZO TECHNOLOGY

Date 03/02/2021

Scale 1:1000

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

2019 Ching Ming and Weekday Observed Peak Pedestrian Flows of 5-Minute Interval

天罡隆義

Project No. 81460

Dwg No. Figure 2-6

Rev. B

X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 2-6B.dwg

青山練靶場界線

Tsing Shan Firing Range Boundary

Queuing Area
= Approximately 114m²

19m

6m

8m

Visitor(for the Disabled)

Loading/Unloading for Visitors

7300

BLOCK 1

BLOCK 2

BLOCK 3

TEMP. TOILET
MALE TOILET

TEMP. TOILET
FEMALE TOILET

D1

D2

L/UL

V1

V2

V3

V4

V5

V6

V7

V8

V9

V10

The Parking Spaces will be Used
for Car and Taxis' Pick-up/Drof-off Activities Only
During Festival Periods.

1.5 Footpath

Local Access Road to
Hing Fu Street

50.82

SHUTTLE BUS

EXISTING PARAPET WALL

LEGEND:

- Site Boundary
- Queuing Area
- Key Management Staff
- Loading/Unloading Spaces for Private Car/Taxi
- Parking Spaces for Private Car
- Parking Spaces for Accessible Car

0 2.5 5 7.5 10

OZZO TECHNOLOGY

Date 28/01/2021

Scale 1:250

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Layout of Application Site

天罡隆義

Project No. 81460

Dwg No. Figure 3-1

Rev. E

X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 3-1E.dwg

LEGEND:

- Application Site
- Proposed Shuttle Bus Route to Site from Siu Hong Station
- Proposed Shuttle Bus Route to Siu Hong Station from Site

Hing Kwai Street

Yan Po Road

Po Tin Estate

General Lay-by at Siu Hong Station (North) PTI

Siu Hong Station

Blossom Garden

TSUN WEN ROAD

Tin King Estate

MING KUM ROAD

TSING TIN ROAD

TUEN MUN ROAD

0 50 100 150 200

OZZO TECHNOLOGY

Date 22/05/2019

Scale 1:5000

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Proposed Routing of Shuttle Bus Services

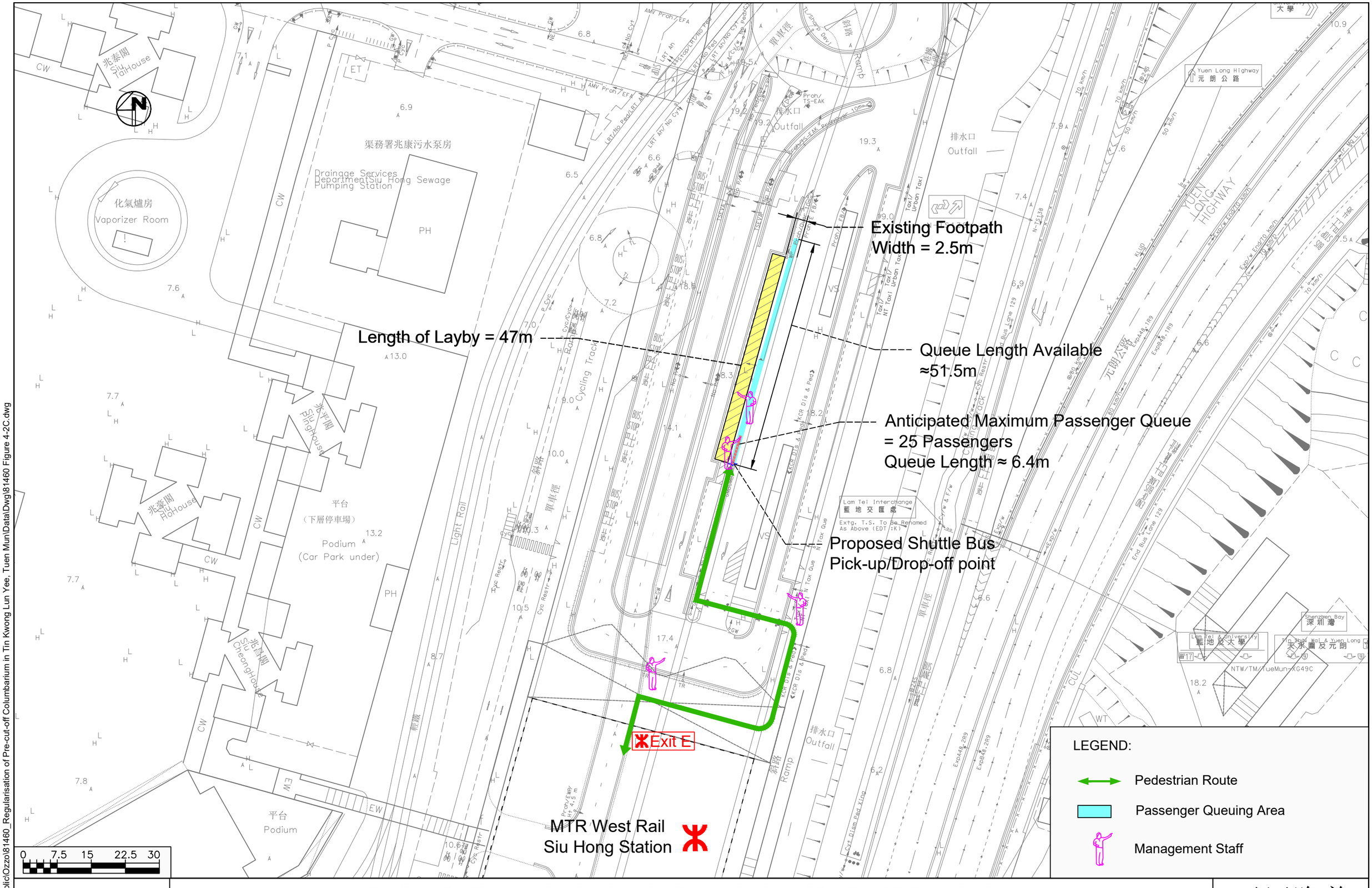
天罡隆義

Project No. 81460

Dwg No. Figure 4-1

Rev. -

X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 4-1.dwg



\\192.168.1.99\public\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 4-2C.dwg

OZZO TECHNOLOGY

Date	Scale
13/07/2020	1:750

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Proposed Pick-up/Drop-off Point at General lay-by at MTR West Rail Siu Hong Station (North)

天罡隆義

Project No.	81460	Rev.
Dwg No.	Figure 4-2	C

Tin Kwong Lun Yee
天罡隆義

Application Site

Hing Fu Street

Yan Po Road

Po Tin
Bus Terminus

Hing Kwai Street

To Tin Kwong Lun Yee
往天罡隆義

你在此
You are Here

Tin King
LRT Station

LEGEND:

- Application Site
- Bus Stop
- Minibus Stop
- LRT Station
- Temporary Traffic Sign with its Facing Direction

0 25 50 75 100

X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 4-3.dwg

OZZO TECHNOLOGY

Date 01/02/2021

Scale 1:2500

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

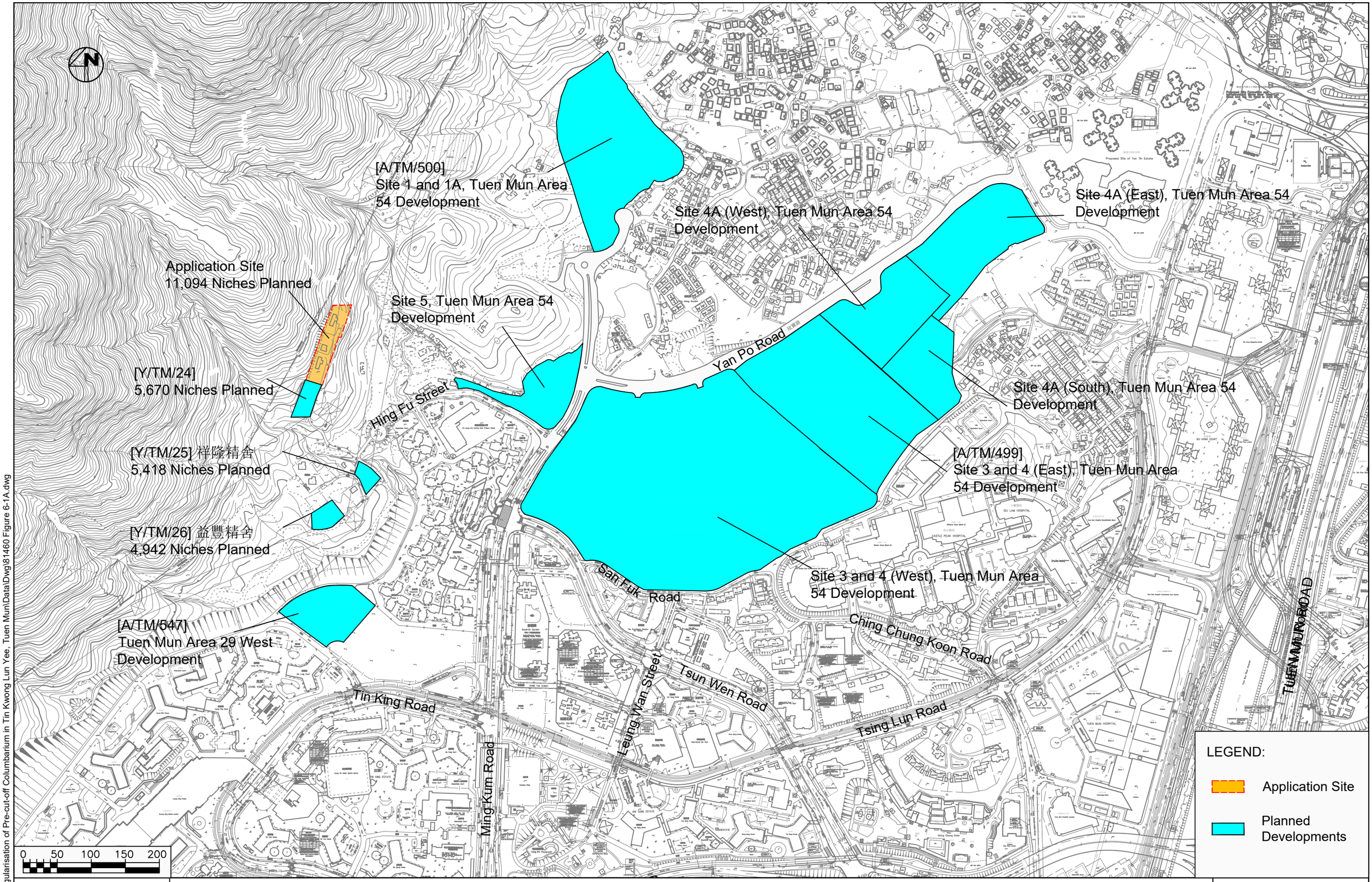
Proposed Temporary Traffic Arrangement During Graving Festival Shadow Period On Weekdays

天罡隆義

Project No. 81460

Dwg No. Figure 4-3

Rev. -



X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 6-1A.dwg

OZZO TECHNOLOGY

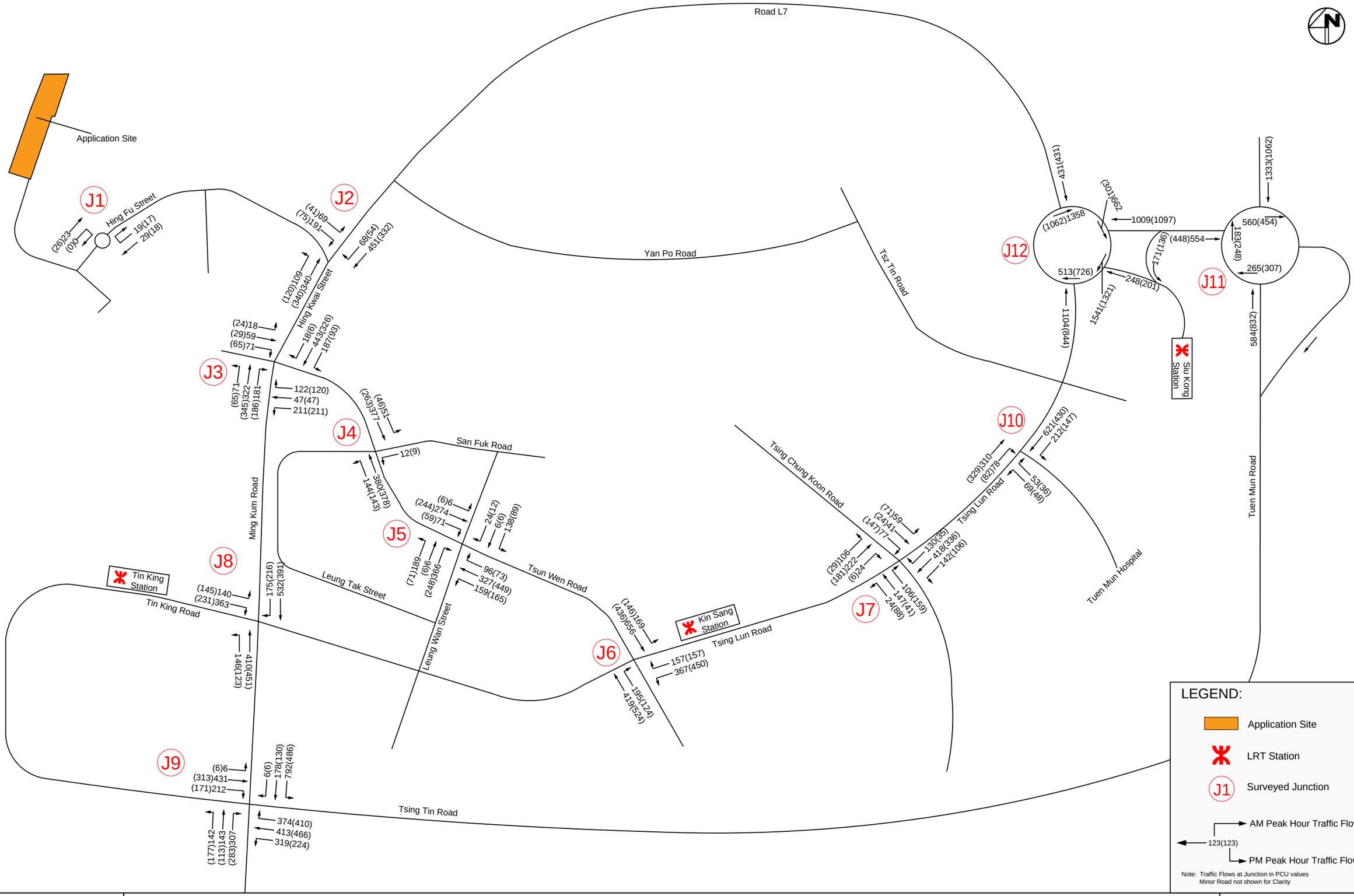
Date	Scale
22/12/2020	1:5000

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Locations of Planned Developments

天罡隆義

Project No.	81460	Rev.
Dwg No.	Figure 6-1	A



X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460-Figure 6-2B.dwg

OZZO TECHNOLOGY

Date 03/02/2021

Scale NTS

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

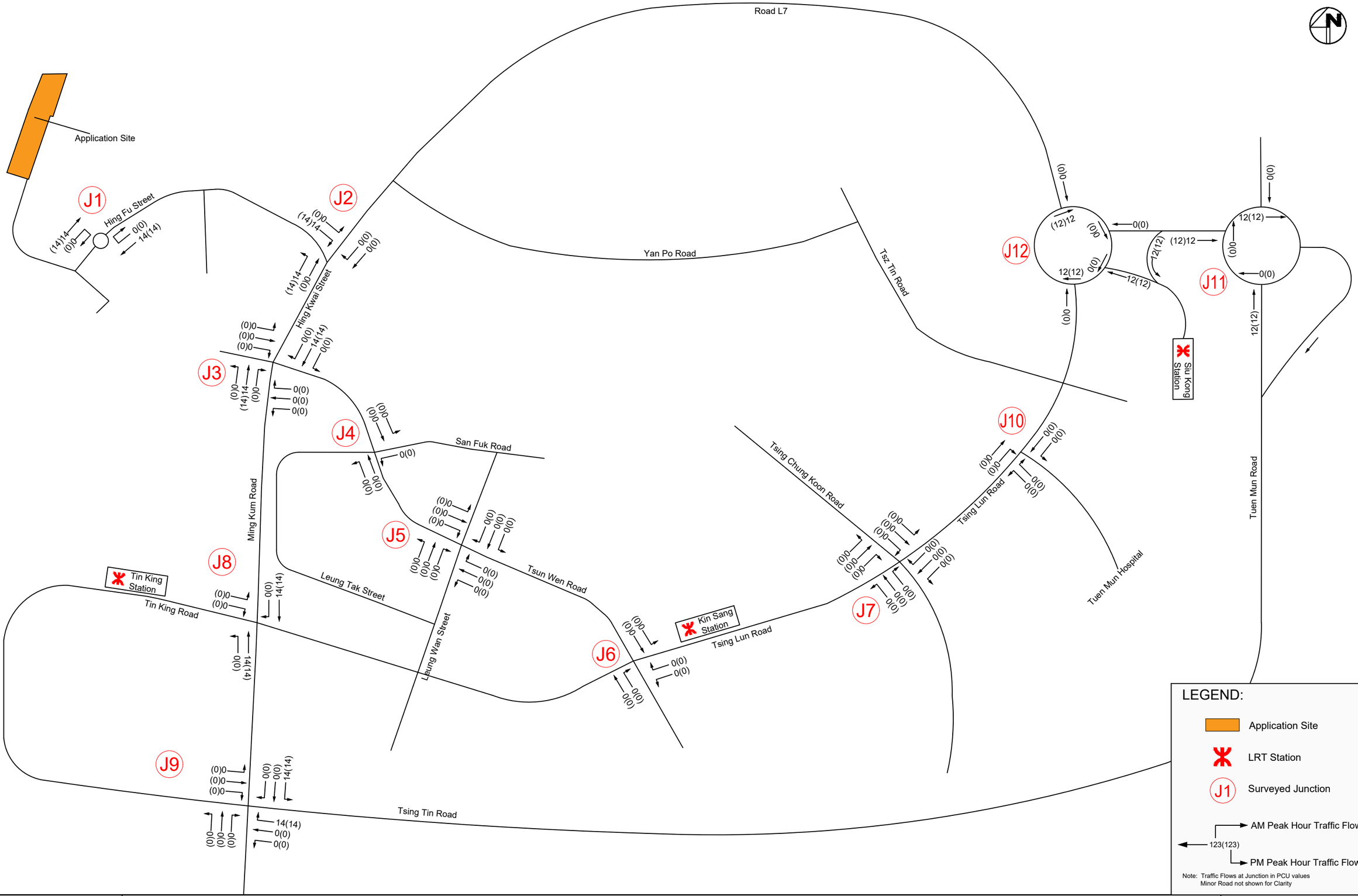
2028 Reference Peak Hour Traffic Flows

天罡隆義

Project No. 81460

Rev. B

Dwg No. Figure 6-2



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OZZO TECHNOLOGY

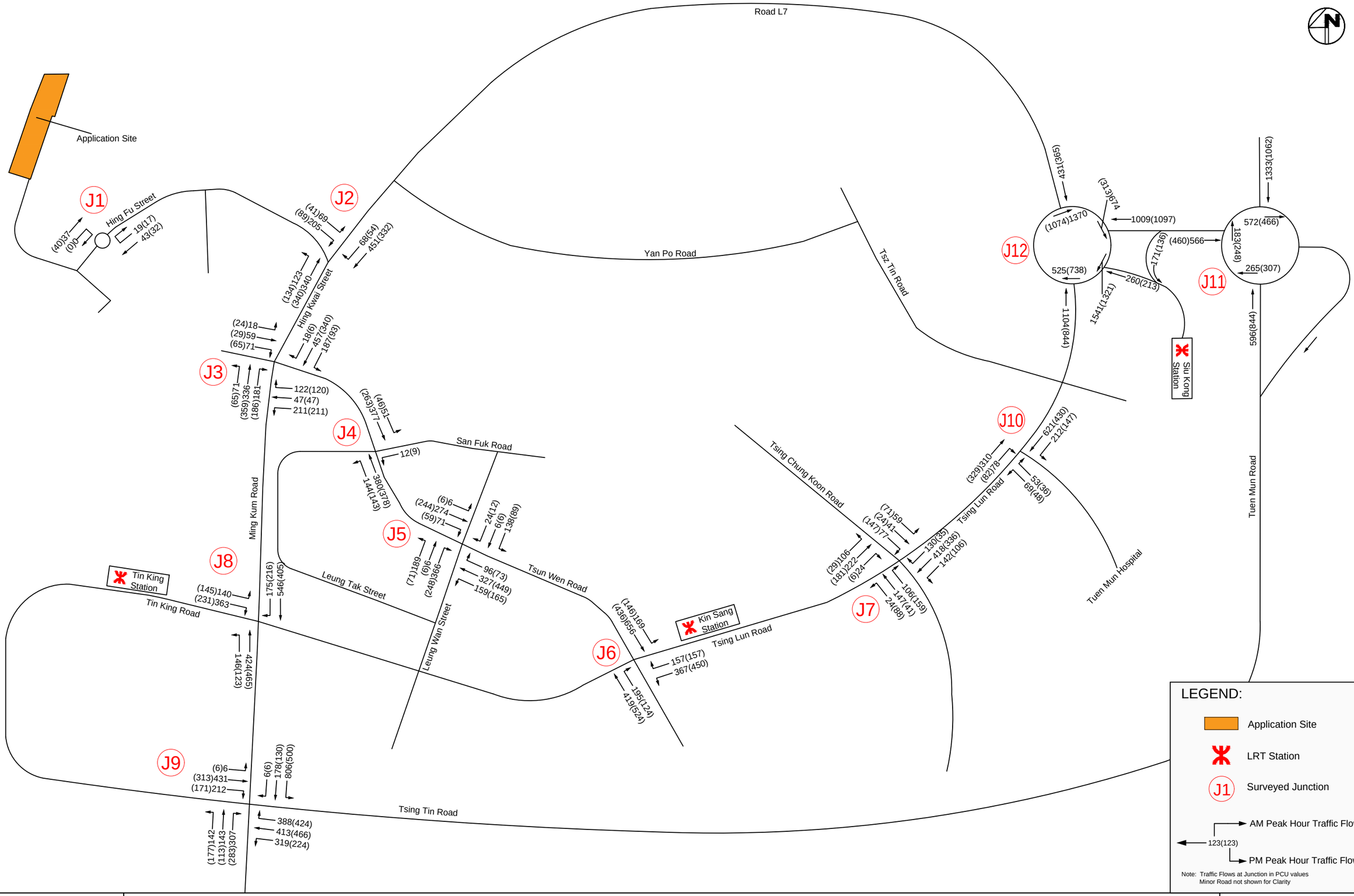
Date	Scale
03/02/2021	NTS

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Forecast Peak Hour Development Traffic Flows

天罡隆義

Project No. 81460	Rev. B
Dwg No. Figure 6-3	



OZZO TECHNOLOGY

Date 03/02/2021

Scale NTS

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

2028 Design Peak Hour Traffic Flows

天罡隆義

Project No. 81460

Dwg No. Figure 6-4

Rev. B

X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460-Figure 6-4B.dwg

Application Site

Hing Fu Street

Hing Kwai Street

Yan Po Road 欣寶路

Yan Po Road

40

258D, 258X, 260X

44A, 44A1, 44B

58M, 58X, 258D
260X, 960, 960A
960B, B3A, E33P

Ming Kum Road

Tsun Wen Road

44A, 44A1, 44B

58M, 58P, 58X
258D, 258X, 960
B3A, E33P, N260

58M, 58X, 258D
260X, 960, 960A
960B, B3A, E33P
K58

44A, 44A1, 44B

Tin King Road

Leung Wan Street

0 25 50 75 100

LEGEND:

- Application Site
- Pedestrian Routes between Public Transport and Application Site
- Bus Stop
- Minibus Stop
- MTR

OZZO TECHNOLOGY

Date 03/02/2021

Scale 1:2500

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Major Pedestrian Desire Line Between Public Transport and Application Site

天罡隆義

Project No. 81460

Rev. B

Dwg No. Figure 6-5

X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 6-5B.dwg

Application Site

Hing Fu Street

(31)[33]

P1

(18)[19]

P2

P3

(12)[11]

Proposed New
1.5m Footpath

Po Tin
Estate

Po Tin
Bus Terminus

LEGEND:

→ Weekday AM Peak Pedestrian Flow

↔ (123)[123] Weekday PM Peak Pedestrian Flow

0 10 20 30 40

OZZO TECHNOLOGY

Date 03/02/2021

Scale 1:1000

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

2028 Design Peak 5-Minutes Pedestrian Flows

天罡隆義

Project No. 81460

Dwg No. Figure 6-6

Rev. B

X:\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 6-6B.dwg

Boundary of Application Site

Existing Road to be Improved / Widened to Provide Space for Passing Vehicles

Surveyed Existing Edge of Driveway

Surveyed Existing Access

Sight Line = 41m (Approx.)

New 1.5m Footpath

Hing Fu Street

Basketball Court

籃球場

BLOCK 1

SHUTTLE BUS

WAITING AREA

SITE ENTRANCE

1744 S.D RP

1744 S.E RP

1150 S.B RP

1150 S.A RP

1151 RP

1724 RP,14

3.4m

5.5m

50.82

15.35

41.90

39.10

36.58

34.45

32.86

31.11

28.75

27.77

Passing Bay

6.9m Light Bus

0 5 10 15 20

OZZO TECHNOLOGY

Date 23/12/2020

Scale 1:500

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Layout of Proposed Widening On Local Access Road and New Lay-By

天罡隆義

Project No. 81460

Dwg No. Figure 6-7

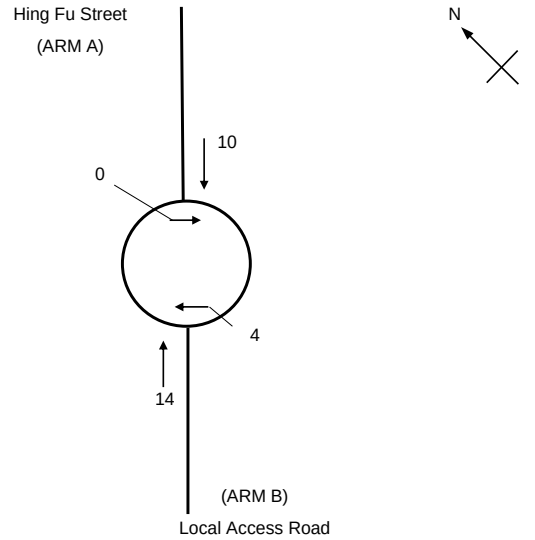
Rev. --

\\192.168.1.99\public\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 6-7.dwg

Appendix A

2019 Junction Calculation Sheets

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J1 : Hing Fu Street Roundabout	**2019 CM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	Dec-20

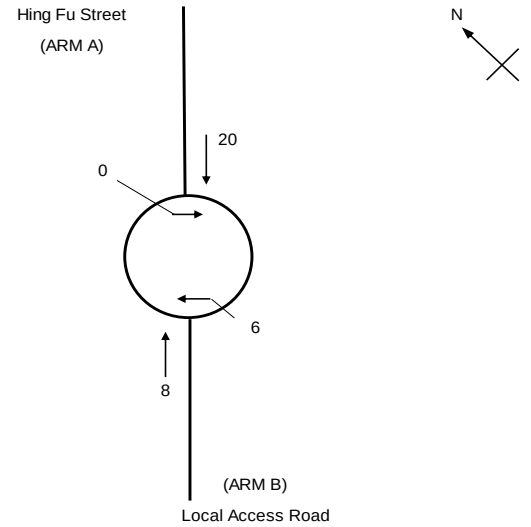


ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.5	2.2
E	=	Entry width (m)	3.4	3.5
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	35.0	58.0
Q	=	Entry flow (pcu/h)	10	14
Qc	=	Circulating flow across entry (pcu/	0	4
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	-0.21	2.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.93	0.79
X2	=	V + ((E-V)/(1+2S))	3.28	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	993	728
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.52	0.47
Qe	=	K(F-Fc*Qc)	927	573
DFC	=	Design flow/Capacity = Q/Qe	0.01	0.02

Total In Sum = 23 PCU

DFC of Critical Approach = 0.02

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J1 : Hing Fu Street Roundabout	**2019 AM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 AM Observed Peak Hour Traffic Flows (Weekday)		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	Dec-20

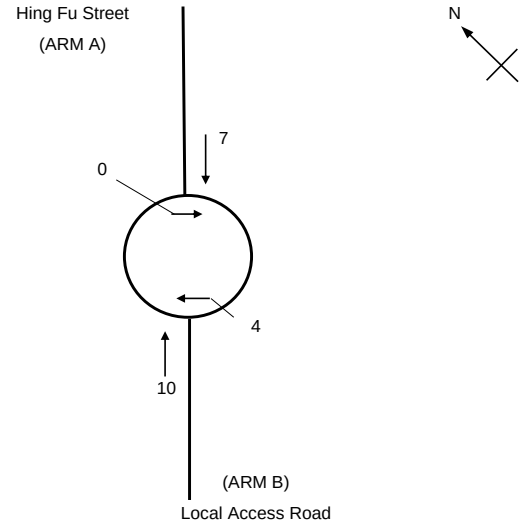


ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.5	2.2
E	=	Entry width (m)	3.4	3.5
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	35.0	58.0
Q	=	Entry flow (pcu/h)	20	8
Qc	=	Circulating flow across entry (pcu/	0	6
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	-0.21	2.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.93	0.79
X2	=	V + ((E-V)/(1+2S))	3.28	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	993	728
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.52	0.47
Qe	=	K(F-Fc*Qc)	927	572
DFC	=	Design flow/Capacity = Q/Qe	0.02	0.01

Total In Sum = 28 PCU

DFC of Critical Approach = 0.02

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J1 : Hing Fu Street Roundabout	**2019 PM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	Dec-20

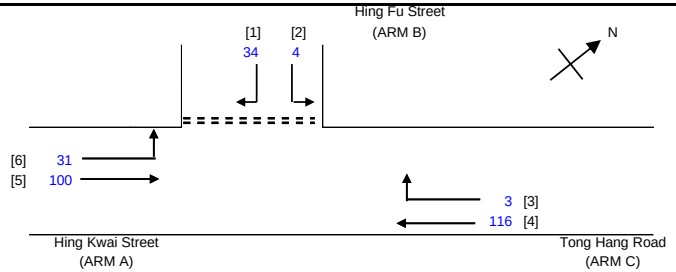


ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.5	2.2
E	=	Entry width (m)	3.4	3.5
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	35.0	58.0
Q	=	Entry flow (pcu/h)	7	10
Qc	=	Circulating flow across entry (pcu/	0	4
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	-0.21	2.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.93	0.79
X2	=	V + ((E-V)/(1+2S))	3.28	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	993	728
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.52	0.47
Qe	=	K(F-Fc*Qc)	927	573
DFC	=	Design flow/Capacity = Q/Qe	0.01	0.02

Total In Sum = 17 PCU

DFC of Critical Approach = 0.02

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J2 : Hing Kwai Street / Tong Hang Street / Hing Fu Street	**2019 CM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows		J2_Hing Fu Street_Hing Kwai Street_P.xls	REVIEWED BY:	OC	Dec-20



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	11.61	(metres)
W cr	=	0.3	(metres)
q a-b	=	31	(pcu/hr)
q a-c	=	100	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	7.00	(metres)
Vr c-b	=	35	(metres)
q c-a	=	116	(pcu/hr)
q c-b	=	3	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.82	(metres)
W b-c	=	3.82	(metres)
Vl b-a	=	58	(metres)
Vr b-a	=	37.6	(metres)
Vr b-c	=	37.6	(metres)
q b-a	=	34	(pcu/hr)
q b-c	=	4	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8887119
E	=	0.9406349
F	=	1.2143102
Y	=	0.599455
F for (Qb-ac)	=	0.1052632

THE CAPACITY OF MOVEMENT :

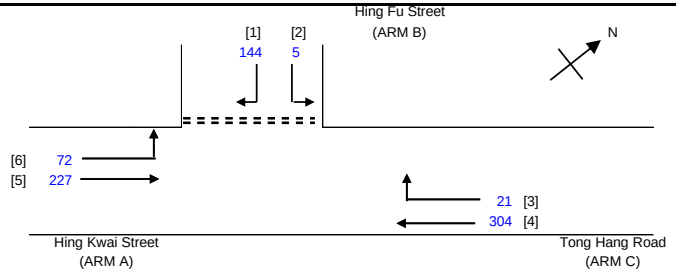
Q b-a	=	524			
Q b-c	=	678	Q b-c (O) =	667	
Q c-b	=	870			
Q b-ac	=	537			
TOTAL FLOW	=	288	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0649
DFC b-c	=	0.0059
DFC c-b	=	0.0034
DFC b-ac	=	0.0708

CRITICAL DFC = 0.07

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J2 : Hing Kwai Street / Tong Hang Street / Hing Fu Street	**2019 AM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 AM Observed Peak Hour Traffic Flows (Weekday)		J2_Hing Fu Street_Hing Kwai Street_P.xls	REVIEWED BY:	OC	Dec-20



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	11.61	(metres)
W cr	=	0.3	(metres)
q a-b	=	72	(pcu/hr)
q a-c	=	227	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	7.00	(metres)
Vr c-b	=	35	(metres)
q c-a	=	304.4	(pcu/hr)
q c-b	=	20.64	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.82	(metres)
W b-c	=	3.82	(metres)
Vl b-a	=	58	(metres)
Vr b-a	=	37.6	(metres)
Vr b-c	=	37.6	(metres)
q b-a	=	144	(pcu/hr)
q b-c	=	5	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8887119
E	=	0.9406349
F	=	1.2143102
Y	=	0.599455
F for (Qb-ac)	=	0.0344828

THE CAPACITY OF MOVEMENT :

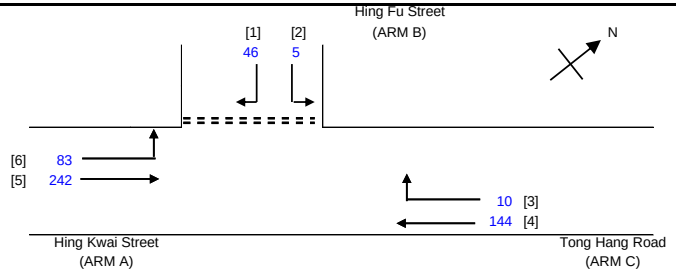
Q b-a	=	469			
Q b-c	=	648	Q b-c (O) =	598.1	
Q c-b	=	825			
Q b-ac	=	474			
TOTAL FLOW	=	774	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3080
DFC b-c	=	0.0080
DFC c-b	=	0.0250
DFC b-ac	=	0.3160

CRITICAL DFC = 0.32

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J2 : Hing Kwai Street / Tong Hang Street / Hing Fu Street	**2019 PM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)		J2_Hing Fu Street_Hing Kwai Street_P.xls	REVIEWED BY:	OC	Dec-20



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	11.61	(metres)
W cr	=	0.3	(metres)
q a-b	=	83	(pcu/hr)
q a-c	=	242	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	7.00	(metres)
Vr c-b	=	35	(metres)
q c-a	=	144.5	(pcu/hr)
q c-b	=	10.32	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.82	(metres)
W b-c	=	3.82	(metres)
Vl b-a	=	58	(metres)
Vr b-a	=	37.6	(metres)
Vr b-c	=	37.6	(metres)
q b-a	=	46	(pcu/hr)
q b-c	=	5	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8887119
E	=	0.9406349
F	=	1.2143102
Y	=	0.599455
F for (Qb-ac)	=	0.1

THE CAPACITY OF MOVEMENT :

Q b-a	=	487			
Q b-c	=	644	Q b-c (O) =	628.6	
Q c-b	=	819			
Q b-ac	=	499			
TOTAL FLOW	=	531	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

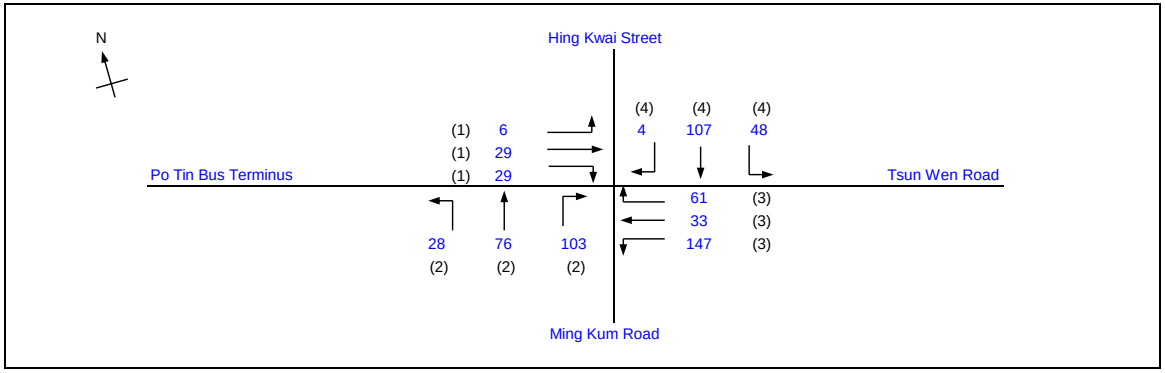
DFC b-a	=	0.0953
DFC b-c	=	0.0080
DFC c-b	=	0.0126
DFC b-ac	=	0.1034

CRITICAL DFC = 0.10

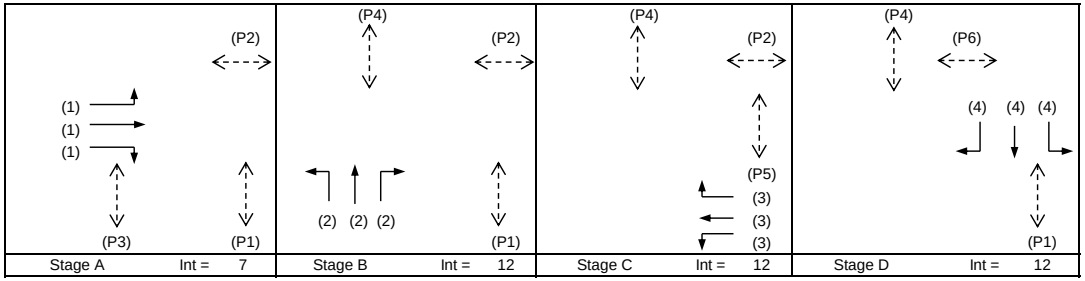
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	FILENAME :	Checked By:	MM	Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows	**2019 CM** J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.168	
Loss time		L =	39	sec
Total Flow		=	669	pcu
Co	= (1.5*L+5)/(1-Y)	=	76.3	sec
Cm	= L/(1-Y)	=	46.9	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	261.1	%
Cp	= 0.9*L/(0.9-Y)	=	48.0	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	261.1	%



	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		79	8
P2	A,B,C	7.2	5	6		77	6
P3	A	10.0	5	8		18	8
P4	B,C,D	12.3	5	10		70	10
P5	C	8.5	5	7		13	8
P6	D	8.6	5	7		25	7

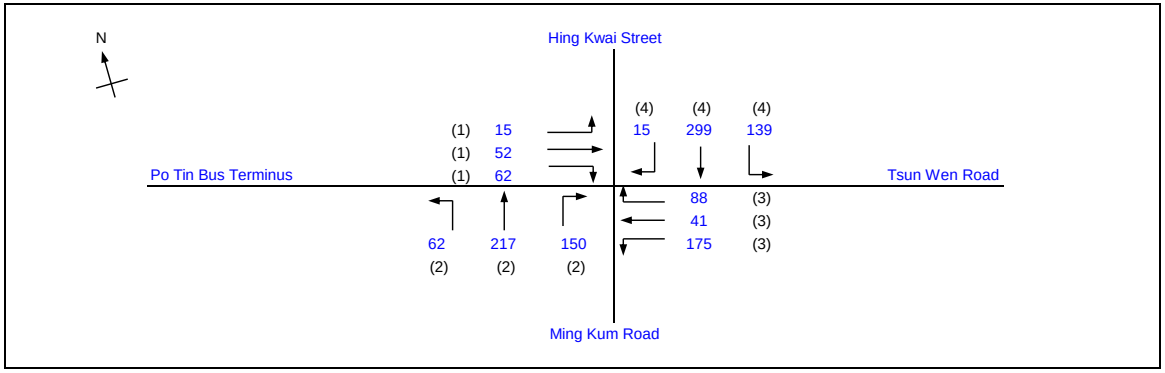
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	6			6	1.00	1870			1870	0.00			1	17	0.021	0	40
RT,SA	A	4.60	1	1	24			2215		29	29	58	0.50	2148			2148	0.03	0.03		13	17	0.191	6	42
LT,SA	B	3.40	2	1	11		N	1955	28	22		50	0.56	1816			1816	0.03			13	18	0.184	6	41
SA	B	3.50	2	1				2105		54		54	0.00	2105			2105	0.03			12	18	0.170	6	41
RT	B	3.50	2	1	26			2105			103	103	1.00	1990			1990	0.05	0.05		25	18	0.343	12	44
LT	C	3.30	3	1	17		N	1945	87			87	1.00	1787			1787	0.05			24	12	0.488	12	55
SA,LT	C	3.40	3	1	20			2095	60	33		93	0.65	1998			1998	0.05	0.05		22	12	0.463	12	53
RT	C	3.40	3	1	25			2095			61	61	1.00	1976			1976	0.03			15	12	0.309	6	49
LT,SA	D	3.70	4	1	16		N	1985	48	29		77	0.62	1876			1876	0.04			20	39	0.126	6	26
RT,SA	D	3.70	4	1	20			2125		78	4	82	0.05	2117			2117	0.04	0.04		19	39	0.119	6	26

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

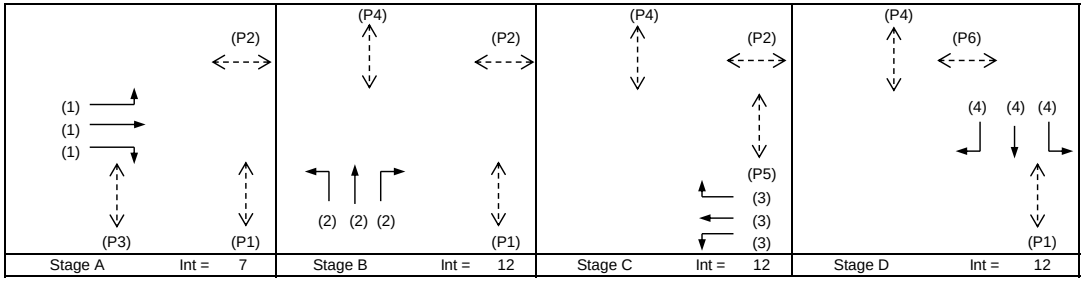
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	**2019 AM**	Checked By:	MM	Dec-20
2019 AM Observed Peak Hour Traffic Flows (Weekday)	FILENAME : J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.315	
Loss time		L =	39	sec
Total Flow		=	1316	pcu
Co	= (1.5*L+5)/(1-Y)	=	92.7	sec
Cm	= L/(1-Y)	=	56.9	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	92.9	%
Cp	= 0.9*L/(0.9-Y)	=	60.0	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	92.9	%



	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		79	8
P2	A,B,C	7.2	5	6		77	6
P3	A	10.0	5	8		18	8
P4	B,C,D	12.3	5	10		70	10
P5	C	8.5	5	7		13	8
P6	D	8.6	5	7		25	7

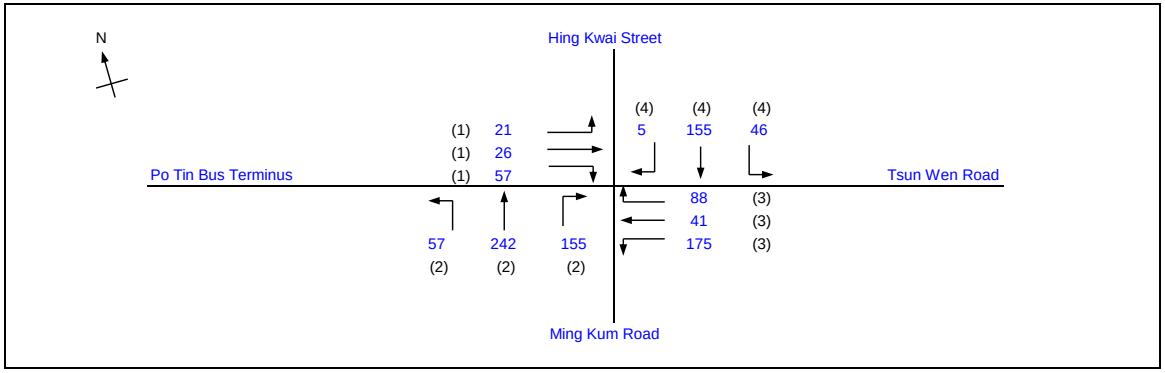
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	15			15	1.00	1870			1870	0.01			2	17	0.058	0	40
RT,SA	A	4.60	1	1	24			2215		52	62	114	0.55	2142			2142	0.05	0.05		14	17	0.374	18	45
LT,SA	B	3.40	2	1	11		N	1955	62	70		132	0.47	1837			1837	0.07			18	18	0.479	18	47
SA	B	3.50	2	1				2105		147		147	0.00	2105			2105	0.07			18	18	0.465	24	46
RT	B	3.50	2	1	26			2105			150	150	1.00	1990			1990	0.08	0.08		19	18	0.501	24	48
LT	C	3.30	3	1	17		N	1945	105			105	1.00	1787			1787	0.06			15	12	0.590	18	60
SA,LT	C	3.40	3	1	20			2095	70	41		111	0.63	2001			2001	0.06	0.06		14	12	0.556	18	56
RT	C	3.40	3	1	25			2095			88	88	1.00	1976			1976	0.04			11	12	0.444	12	52
LT,SA	D	3.70	4	1	16		N	1985	139	44		184	0.76	1853			1853	0.10			25	39	0.305	24	28
RT,SA	D	3.70	4	1	20			2125		255	15	270	0.06	2116			2116	0.13	0.13		33	39	0.393	36	30

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

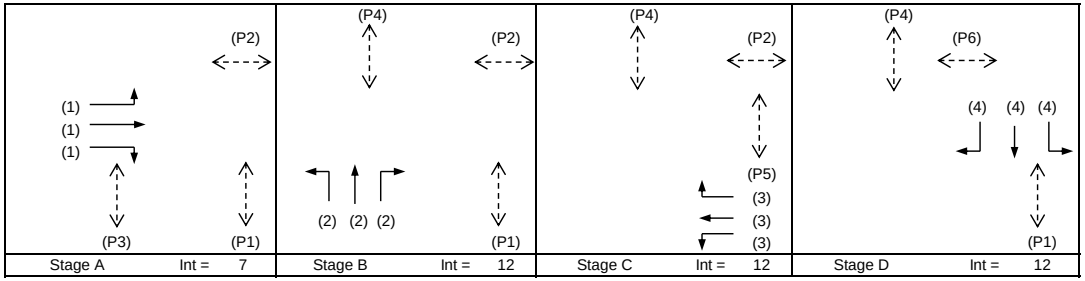
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	FILENAME :	Checked By:	MM	Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)	**2019 PM** J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.229	
Loss time		L =	39	sec
Total Flow		=	1068	pcu
Co	= (1.5*L+5)/(1-Y)	=	82.3	sec
Cm	= L/(1-Y)	=	50.6	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	165.5	%
Cp	= 0.9*L/(0.9-Y)	=	52.3	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	165.5	%

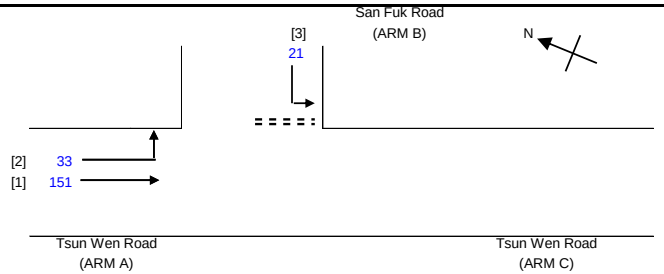


	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		79	8
P2	A,B,C	7.2	5	6		77	6
P3	A	10.0	5	8		18	8
P4	B,C,D	12.3	5	10		70	10
P5	C	8.5	5	7		13	8
P6	D	8.6	5	7		25	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	21			21	1.00	1870			1870	0.01			4	17	0.078	0	41
RT,SA	A	4.60	1	1	24			2215		26	57	83	0.69	2124			2124	0.04	0.04		14	17	0.274	12	43
LT,SA	B	3.40	2	1	11		N	1955	57	85		142	0.40	1854			1854	0.08			27	18	0.510	24	48
SA	B	3.50	2	1				2105		157		157	0.00	2105			2105	0.07			26	18	0.499	24	47
RT	B	3.50	2	1	26			2105			155	155	1.00	1990			1990	0.08	0.08		28	18	0.518	24	48
LT	C	3.30	3	1	17		N	1945	105			105	1.00	1787			1787	0.06			21	12	0.590	18	60
SA,LT	C	3.40	3	1	20			2095	70	41		111	0.63	2001			2001	0.06	0.06		20	12	0.556	18	56
RT	C	3.40	3	1	25			2095			88	88	1.00	1976			1976	0.04			16	12	0.444	12	52
LT,SA	D	3.70	4	1	16		N	1985	46	55		101	0.46	1903			1903	0.05			19	39	0.164	12	26
RT,SA	D	3.70	4	1	20			2125		100	5	105	0.05	2117			2117	0.05	0.05		18	39	0.153	12	26

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J4 : Tsun Wen Road / San Fuk Road	**2019 CM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	OC	Dec-20



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.50	(metres)
W cr	=	0	(metres)
q a-b	=	33	(pcu/hr)
q a-c	=	151	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.95	(metres)
Vl b-a	=	49	(metres)
Vr b-a	=	38	(metres)
Vr b-c	=	38	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	21	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5715505
E	=	1.0397299
F	=	0.5859548
Y	=	0.74125

THE CAPACITY OF MOVEMENT :

Q b-a	=	333			
Q b-c	=	729	Q b-c (O) =	729	
Q c-b	=	408			

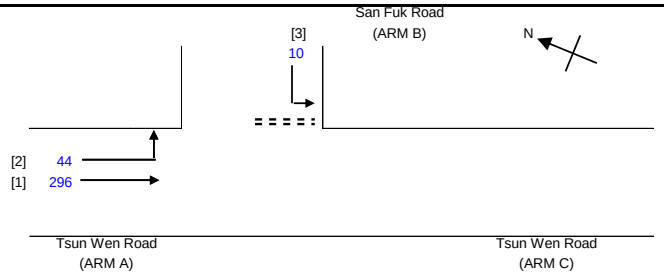
TOTAL FLOW = 204 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0281
DFC c-b	=	0.0000

CRITICAL DFC = 0.03

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J4 : Tsun Wen Road / San Fuk Road	**2019 AM**	CHECKED BY:	MM	Dec-20
2019 AM Observed Peak Hour Traffic Flows (Weekday)	FILENAME : J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	OC	Dec-20



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.50	(metres)
W cr	=	0	(metres)
q a-b	=	44	(pcu/hr)
q a-c	=	296	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.95	(metres)
Vl b-a	=	49	(metres)
Vr b-a	=	38	(metres)
Vr b-c	=	38	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	10	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5715505
E	=	1.0397299
F	=	0.5859548
Y	=	0.74125

THE CAPACITY OF MOVEMENT :

Q b-a	=	310			
Q b-c	=	687	Q b-c (O) =	687	
Q c-b	=	383			

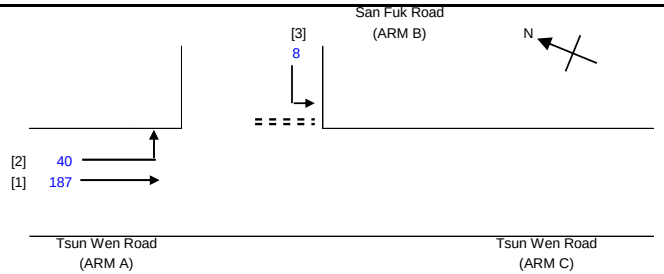
TOTAL FLOW = 350.8228486 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0150
DFC c-b	=	0.0000

CRITICAL DFC = 0.02

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J4 : Tsun Wen Road / San Fuk Road	**2019 PM**	FILENPME :	CHECKED BY:	MM	Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	OC	Dec-20



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREPM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREPM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREPM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.50	(metres)
W cr	=	0	(metres)
q a-b	=	40	(pcu/hr)
q a-c	=	187	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.95	(metres)
Vl b-a	=	49	(metres)
Vr b-a	=	38	(metres)
Vr b-c	=	38	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	8	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5715505
E	=	1.0397299
F	=	0.5859548
Y	=	0.74125

THE CAPACITY OF MOVEMENT :

Q b-a	=	327			
Q b-c	=	718	Q b-c (O) =	718	
Q c-b	=	401			

TOTAL FLOW = 235.2576749 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

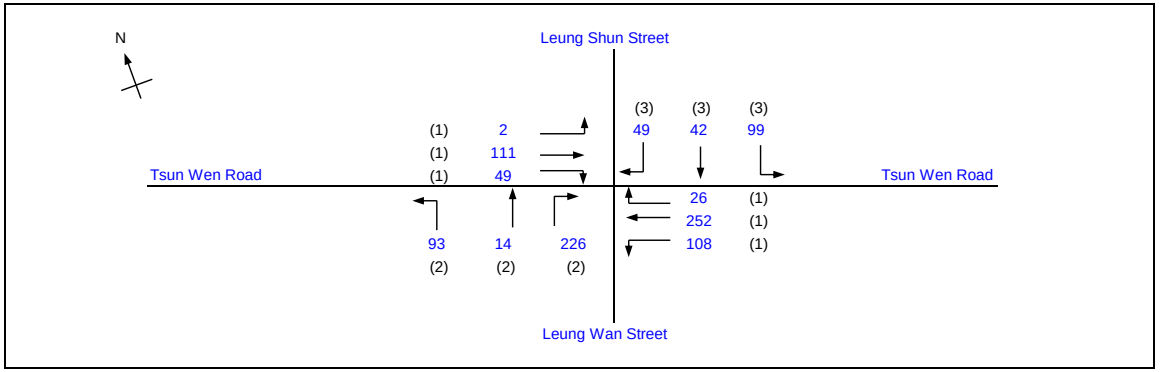
DFC b-a	=	0.0000
DFC b-c	=	0.0115
DFC c-b	=	0.0000

CRITICAL DFC = 0.01

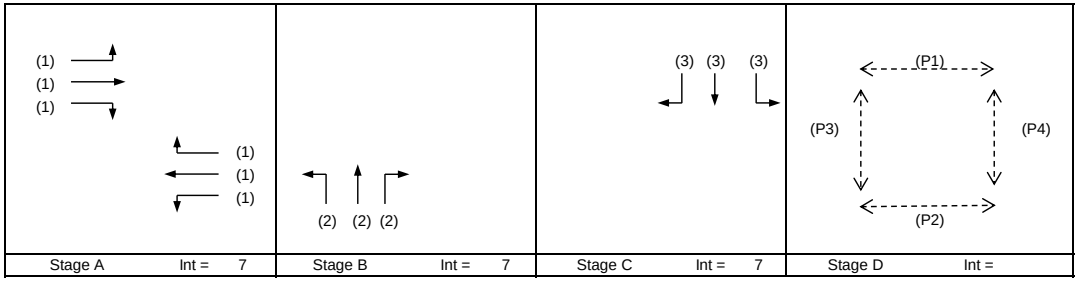
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J5: Tsun Wen Road / Leung Wan Street	**2019 CM**	Checked By:	MM	Dec-20
2019 Ching Ming Observed Hour Traffic Flows	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.355	
Loss time		L =	43	sec
Total Flow		=	1069	pcu
Co	= (1.5*L+5)/(1-Y)	=	107.8	sec
Cm	= L/(1-Y)	=	66.7	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	62.5	%
Cp	= 0.9*L/(0.9-Y)	=	71.0	sec
Ymax	= 1-L/C	=	0.642	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	62.5	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

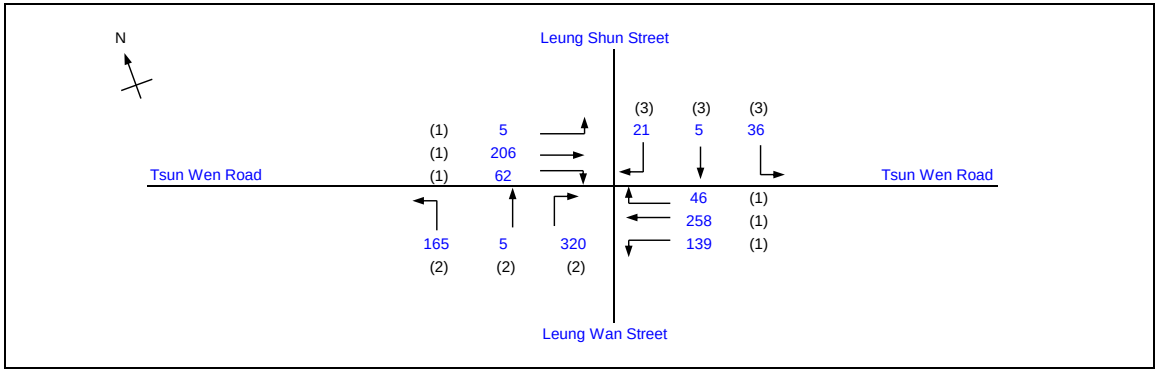
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	2	52		54	0.04	1934			1934	0.028			6	21	0.161	6	39
SA	A	3.30	1	1				2085		59		59	0.00	2085			2085	0.028			6	21	0.161	6	39
RT	A	3.30	1	1	30	O		2085			49	49	1.00	1767	12	60	1827	0.027			6	21	0.152	6	39
LT,SA	A	3.50	1	1	10		N	1965	108	58		166	0.65	1790			1790	0.093			20	21	0.530	24	46
SA	A	3.40	1	1				2095		194		194	0.00	2095			2095	0.093	0.093		20	21	0.530	30	45
RT	A	3.40	1	1	30	O		2095			26	26	1.00	1776	12	60	1836	0.014			3	21	0.079	0	38
LT,SA,RT	B	5.50	2	1	25		N	2165	93	14	226	333	0.96	2047			2047	0.163	0.163		35	33	0.591	48	38
LT,SA,RT	C	3.60	3	1	25		N	1975	99	42	49	189	0.78	1887			1887	0.100	0.100		22	20	0.600	30	49
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

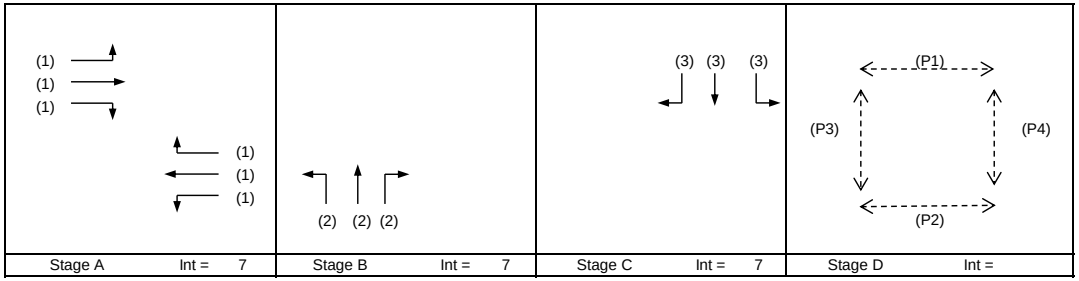
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J5: Tsun Wen Road / Leung Wan Street	**2019 AM**	Checked By:	MM	Dec-20
2019 AM Observed Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.376	
Loss time		L =	43	sec
Total Flow		=	1269	pcu
Co	= (1.5*L+5)/(1-Y)	=	111.4	sec
Cm	= L/(1-Y)	=	68.9	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	53.6	%
Cp	= 0.9*L/(0.9-Y)	=	73.8	sec
Ymax	= 1-L/C	=	0.642	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	53.6	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

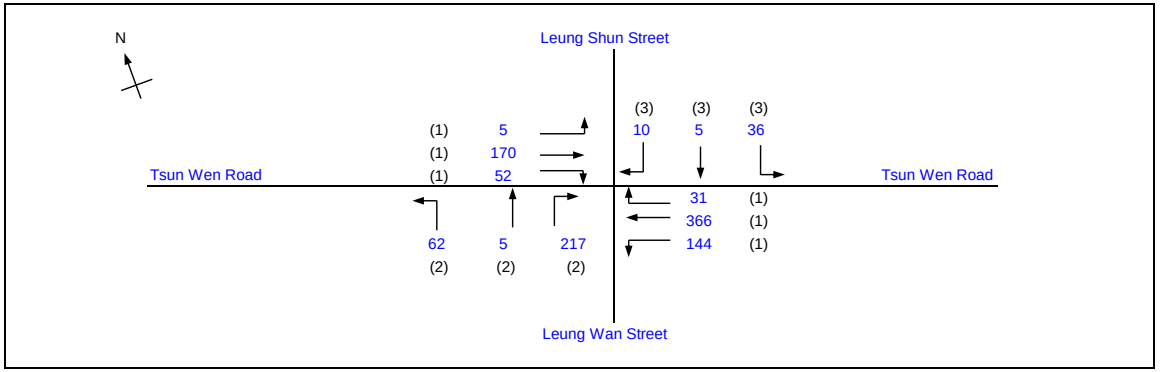
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	5	97		102	0.05	1930			1930	0.053			11	21	0.301	12	41
SA	A	3.30	1	1				2085		110		110	0.00	2085			2085	0.053			11	21	0.301	18	41
RT	A	3.30	1	1	30	O		2085			62	62	1.00	1767	12	60	1827	0.034			7	21	0.194	6	39
LT,SA	A	3.50	1	1	10		N	1965	139	42		181	0.77	1762			1762	0.103			21	21	0.589	24	48
SA	A	3.40	1	1				2095		216		216	0.00	2095			2095	0.103	0.103		21	21	0.589	30	47
RT	A	3.40	1	1	30	O		2095			46	46	1.00	1776	12	60	1836	0.025			5	21	0.144	6	39
LT,SA,RT	B	5.50	2	1	25		N	2165	165	5	320	490	0.99	2044			2044	0.240	0.240		49	33	0.872	78	37
LT,SA,RT	C	3.60	3	1	25		N	1975	36	5	21	62	0.92	1872			1872	0.033	0.033		7	20	0.198	6	40
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

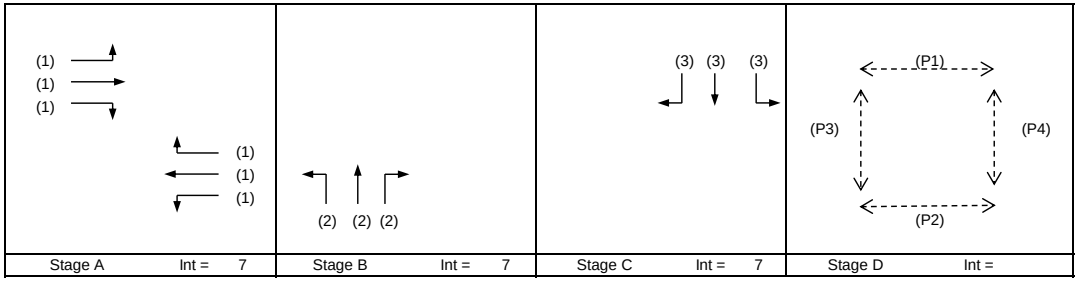
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J5: Tsun Wen Road / Leung Wan Street	**2019 PM**	Checked By:	MM	Dec-20
2019 PM Observed Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.297	
Loss time		L =	43	sec
Total Flow		=	1104	pcu
Co	= (1.5*L+5)/(1-Y)	=	98.9	sec
Cm	= L/(1-Y)	=	61.2	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	94.1	%
Cp	= 0.9*L/(0.9-Y)	=	64.2	sec
Ymax	= 1-L/C	=	0.642	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	94.1	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

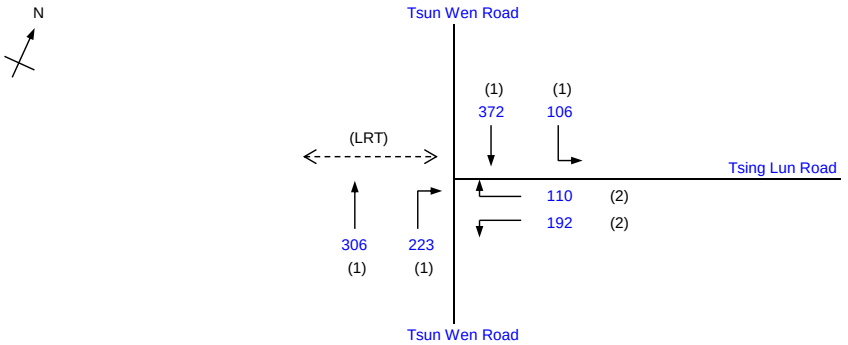
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	5	79		84	0.06	1927			1927	0.044			11	21	0.250	12	40
SA	A	3.30	1	1				2085		91		91	0.00	2085			2085	0.044			11	21	0.250	12	40
RT	A	3.30	1	1	30	O		2085			52	52	1.00	1767	12	60	1827	0.028			7	21	0.161	6	39
LT,SA	A	3.50	1	1	10		N	1965	144	92		236	0.61	1800			1800	0.131			34	21	0.749	42	58
SA	A	3.40	1	1				2095		275		275	0.00	2095			2095	0.131	0.131		34	21	0.749	48	56
RT	A	3.40	1	1	30	O		2095			31	31	1.00	1776	12	60	1836	0.017			4	21	0.096	0	38
LT,SA,RT	B	5.50	2	1	25		N	2165	62	5	217	284	0.98	2045			2045	0.139	0.139		36	33	0.505	36	36
LT,SA,RT	C	3.60	3	1	25		N	1975	36	5	10	52	0.90	1874			1874	0.028	0.028		7	20	0.165	6	40
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

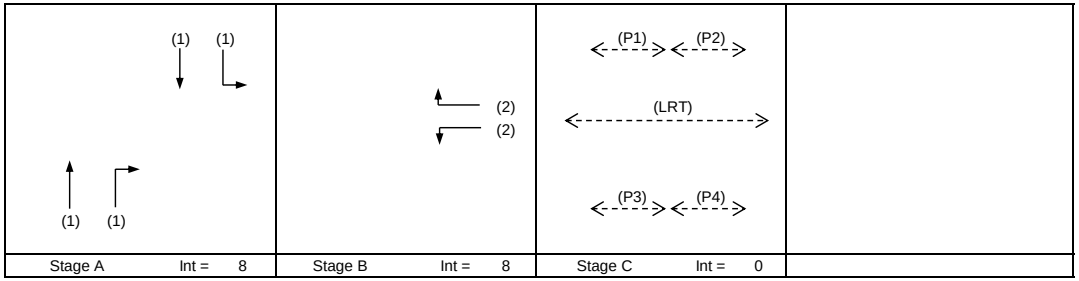
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J6: Tsing Lun Road / Tsun Wen Road	**2019 CM**	Checked By:	MM	Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows	FILENAME : J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	72	sec
Sum(y)		Y =	0.235	
Loss time		L =	36	sec
Total Flow		=	1310	pcu
Co	= (1.5*L+5)/(1-Y)	=	77.1	sec
Cm	= L/(1-Y)	=	47.1	sec
Yult		=	0.630	
R.C.ult	= (Yult-Y)/Y*100%	=	168.2	%
Cp	= 0.9*L/(0.9-Y)	=	48.7	sec
Ymax	= 1-L/C	=	0.500	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	91.6	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

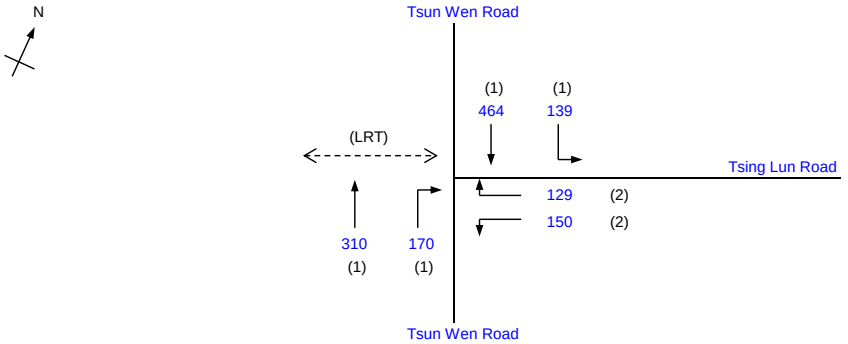
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		306		306	0.00	4030			4030	0.076			12	21	0.261	12	18
RT	A	3.50	1	1	10	O		2105			223	223	1.00	1630	12	100	1730	0.129	0.129		20	21	0.442	18	21
LT	A	3.30	1	1	10		N	1945	106			106	1.00	1691			1691	0.063			10	21	0.215	6	18
SA	A	3.30	1	2	10			4170		372		372	0.00	4170			4170	0.089			14	21	0.306	15	18
LT	B	3.30	2	1	10			2085	192			192	1.00	1813			1813	0.106	0.106		16	15	0.509	18	27
RT	B	3.50	2	1	10			2105			110	110	1.00	1830			1830	0.060			9	15	0.288	6	23
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

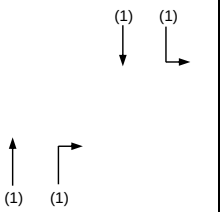
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J6: Tsing Lun Road / Tsun Wen Road	**2019 AM**	Checked By:	MM	Dec-20
2019 AM Observed Peak Hour Traffic Flows (Weekday)	FILENAME : J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	OC	Dec-20



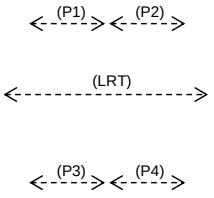
			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	72	sec
Sum(y)		Y =	0.194	
Loss time		L =	36	sec
Total Flow		=	1362	pcu
Co	= (1.5*L+5)/(1-Y)	=	73.2	sec
Cm	= L/(1-Y)	=	44.7	sec
Yult		=	0.630	
R.C.ult	= (Yult-Y)/Y*100%	=	225.0	%
Cp	= 0.9*L/(0.9-Y)	=	45.9	sec
Ymax	= 1-L/C	=	0.500	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	132.1	%



Stage A Int = 8



Stage B Int = 8



Stage C Int = 0

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

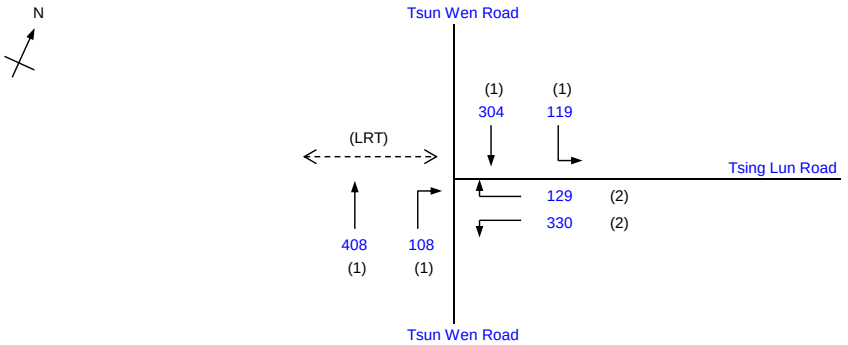
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		310		310	0.00	4030			4030	0.077			14	21	0.263	12	18
RT	A	3.50	1	1	10	O		2105			170	170	1.00	1630	12	100	1730	0.098	0.111		18	21	0.337	12	20
LT	A	3.30	1	1	10		N	1945	139			139	1.00	1691			1691	0.082			15	21	0.282	6	19
SA	A	3.30	1	2	10			4170		464		464	0.00	4170			4170	0.111			21	21	0.382	18	19
LT	B	3.30	2	1	10			2085	150			150	1.00	1813			1813	0.083	0.083		15	15	0.396	12	25
RT	B	3.50	2	1	10			2105			129	129	1.00	1830			1830	0.070			13	15	0.338	12	24
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

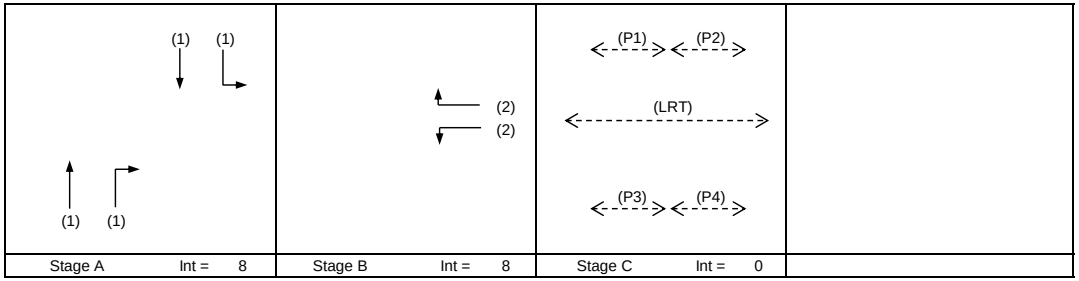
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J6: Tsing Lun Road / Tsun Wen Road	**2019 PM**	Checked By:	MM	Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)	FILENAME : J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	72	sec
Sum(y)		Y =	0.283	
Loss time		L =	36	sec
Total Flow		=	1398	pcu
Co	= (1.5*L+5)/(1-Y)	=	82.3	sec
Cm	= L/(1-Y)	=	50.2	sec
Yult		=	0.630	
R.C.ult	= (Yult-Y)/Y*100%	=	122.4	%
Cp	= 0.9*L/(0.9-Y)	=	52.5	sec
Ymax	= 1-L/C	=	0.500	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	58.9	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

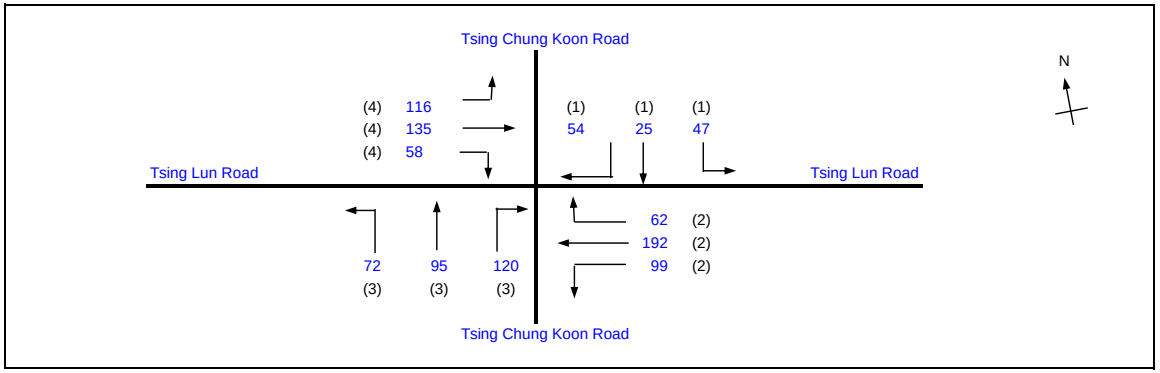
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		408		408	0.00	4030			4030	0.101			13	21	0.347	15	19
RT	A	3.50	1	1	10	O		2105			108	108	1.00	1630	12	100	1730	0.063	0.101		8	21	0.215	6	18
LT	A	3.30	1	1	10		N	1945	119			119	1.00	1691			1691	0.070			9	21	0.241	6	19
SA	A	3.30	1	2	10			4170		304		304	0.00	4170			4170	0.073			9	21	0.250	12	18
LT	B	3.30	2	1	10			2085	330			330	1.00	1813			1813	0.182	0.182		23	15	0.874	42	25
RT	B	3.50	2	1	10			2105			129	129	1.00	1830			1830	0.070			9	15	0.338	12	24
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

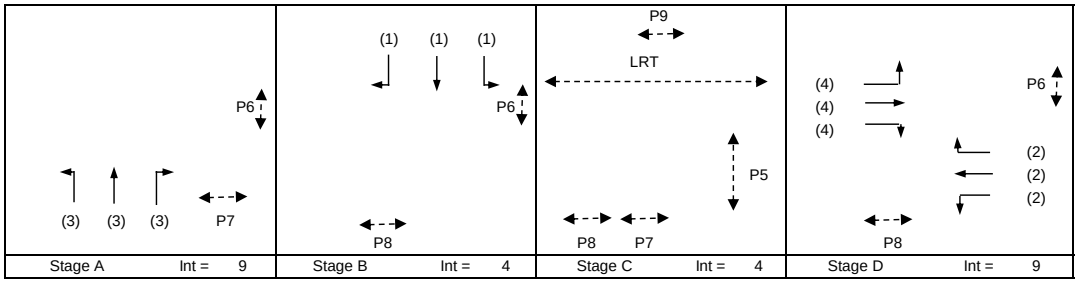
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2019 CM**	Prepared By:	JL	Dec-20
J7: Tsing Lun Road / Tsing Chung Koon Road	PROJECT NO.: 81460	Checked By:	MM	Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows	FILENAME : J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Reviewed By:	OC	Dec-20



		Existing Cycle Time	
No. of stages per cycle	N =	4	
Cycle time	C =	101	sec
Sum(y)	Y =	0.310	
Loss time	L =	39	sec
Total Flow	=	1072	pcu
Co = (1.5*L+5)/(1-Y)	=	92.1	sec
Cm = L/(1-Y)	=	56.6	sec
Yult	=	0.608	
R.C.ult = (Yult-Y)/Y*100%	=	95.7	%
Cp = 0.9*L/(0.9-Y)	=	59.5	sec
Ymax = 1-L/C	=	0.614	
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	78.0	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	83	3
P7	A,C	5.5	5	5	6	33	5
P8	B,C,D	7.0	5	6	1	61	6
P9	C	7.5	5	6	1	11	6

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	72	95		166	0.43	1926			1926	0.086	0.086		17	20	0.435	18	35
RT	A	3.70	3	1	18			2125			120	120	1.00	1962			1962	0.061			12	20	0.309	12	33
LT,SA,RT	B	3.50	1	1	15		N	1965	47	25	54	126	0.80	1819			1819	0.069	0.069		14	16	0.435	12	39
LT,SA	D	3.30	2	1	13		N	1945	99	192		291	0.34	1872			1872	0.155	0.155		31	26	0.603	36	35
RT	D	3.30	2	1	17	O		2085			62	62	1.00	1705	10	59	1764	0.035			7	26	0.135	6	27
LT,SA	D	3.40	4	1	13		N	1955	116	135		251	0.46	1856			1856	0.135			27	26	0.524	30	33
RT	D	3.80	4	1	20	O		2135			58	58	1.00	1772	18	107	1879	0.031			6	26	0.119	6	26
PED,LRT	C																			16		16			

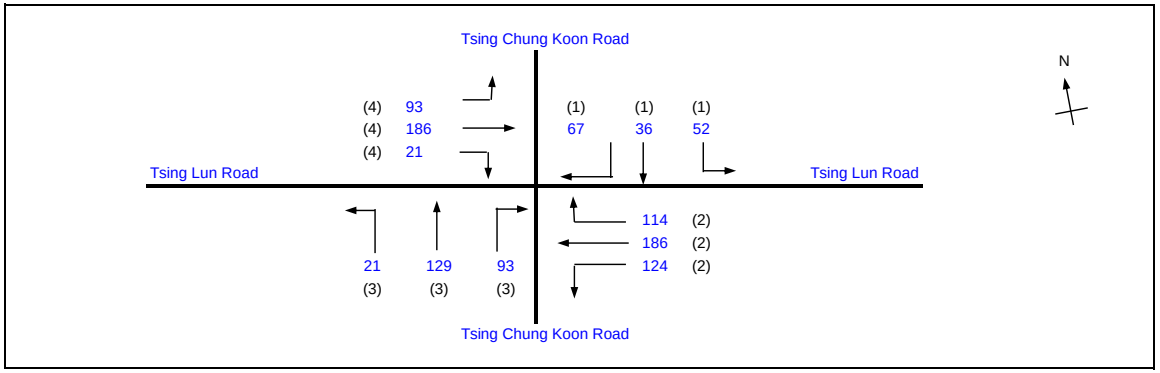
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED

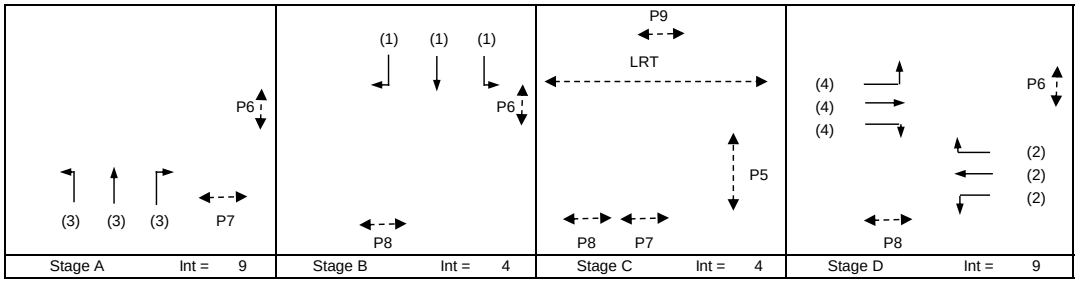
TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		
J7: Tsing Lun Road / Tsing Chung Koon Road	**2019 AM**	
2019 AM Observed Peak Hour Traffic Flows (Weekday)		

PROJECT NO.: 81460	Prepared By:	JL	Dec-20
FILENAME :	Checked By:	MM	Dec-20
J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	101	sec
Sum(y)		Y =	0.327	
Loss time		L =	39	sec
Total Flow		=	1120	pcu
Co	= (1.5*L+5)/(1-Y)	=	94.4	sec
Cm	= L/(1-Y)	=	58.0	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	85.7	%
Cp	= 0.9*L/(0.9-Y)	=	61.3	sec
Ymax	= 1-L/C	=	0.614	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	68.9	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	83	3
P7	A,C	5.5	5	5	6	33	5
P8	B,C,D	7.0	5	6	1	61	6
P9	C	7.5	5	6	1	11	6

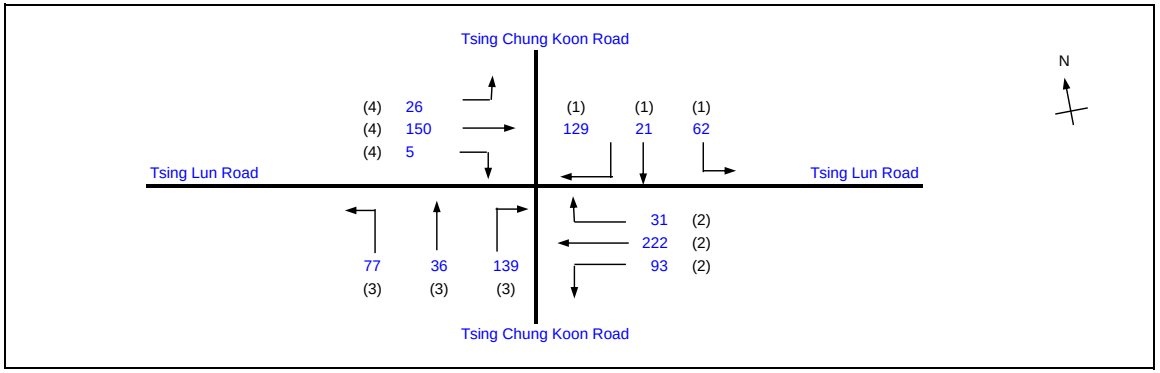
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	21	129		150	0.14	1972			1972	0.076	0.076		14	20	0.383	18	34
RT	A	3.70	3	1	18			2125			93	93	1.00	1962			1962	0.047			9	20	0.239	12	32
LT,SA,RT	B	3.50	1	1	15		N	1965	52	36	67	155	0.77	1825			1825	0.085	0.085		16	16	0.535	18	42
LT,SA	D	3.30	2	1	13		N	1945	124	186		310	0.40	1859			1859	0.166	0.166		32	26	0.647	36	36
RT	D	3.30	2	1	17	O		2085			114	114	1.00	1705	10	59	1764	0.064			12	26	0.250	12	28
LT,SA	D	3.40	4	1	13		N	1955	93	186		279	0.33	1883			1883	0.148			28	26	0.575	30	34
RT	D	3.80	4	1	20	O		2135			21	21	1.00	1772	18	107	1879	0.011			2	26	0.043	0	25
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

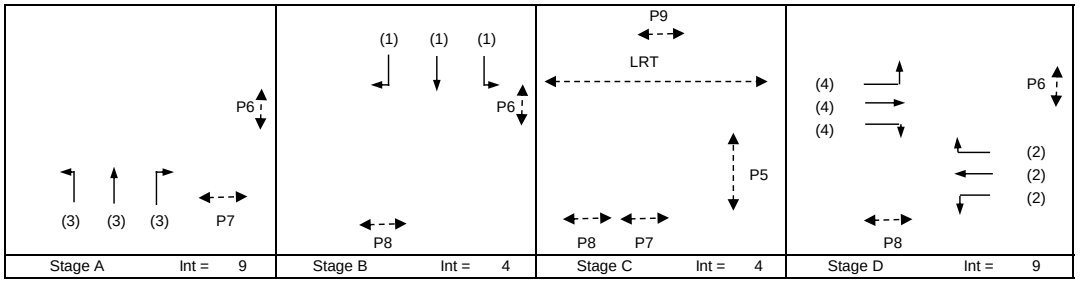
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2019 PM**		
J7: Tsing Lun Road / Tsing Chung Koon Road	PROJECT NO.: 81460	Prepared By:	JL Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)	FILENAME : J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Checked By:	MM Dec-20
		Reviewed By:	OC Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	101	sec
Sum(y)		Y =	0.345	
Loss time		L =	39	sec
Total Flow		=	991	pcu
Co	= (1.5*L+5)/(1-Y)	=	96.9	sec
Cm	= L/(1-Y)	=	59.5	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	76.2	%
Cp	= 0.9*L/(0.9-Y)	=	63.2	sec
Ymax	= 1-L/C	=	0.614	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	60.2	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	83	3
P7	A,C	5.5	5	5	6	33	5
P8	B,C,D	7.0	5	6	1	61	6
P9	C	7.5	5	6	1	11	6

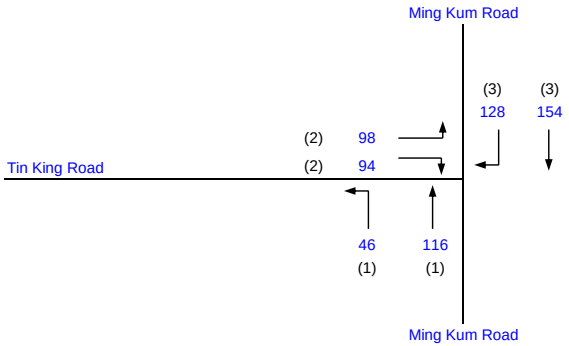
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	77	36		114	0.68	1888			1888	0.060	0.060		11	20	0.304	12	33
RT	A	3.70	3	1	18			2125			139	139	1.00	1962			1962	0.071			13	20	0.359	18	34
LT,SA,RT	B	3.50	1	1	15		N	1965	62	21	129	212	0.90	1802			1802	0.117	0.117		21	16	0.741	30	53
LT,SA	D	3.30	2	1	13		N	1945	93	222		315	0.30	1881			1881	0.167	0.167		30	26	0.650	36	36
RT	D	3.30	2	1	17	O		2085			31	31	1.00	1705	10	59	1764	0.018			3	26	0.068	0	26
LT,SA	D	3.40	4	1	13		N	1955	26	150		175	0.15	1922			1922	0.091			16	26	0.354	18	29
RT	D	3.80	4	1	20	O		2135			5	5	1.00	1772	18	107	1879	0.003			0	26	0.011	0	25
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

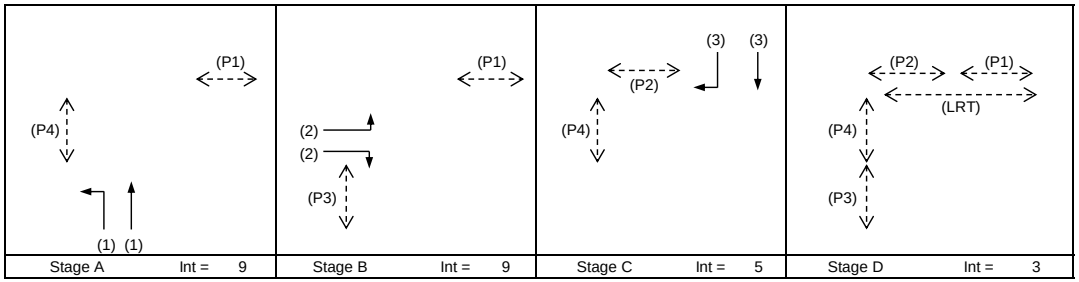
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J8: Tin King Road / Ming Kum Road	**2019 CM**	Checked By:	MM	Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.166	
Loss time		L =	37	sec
Total Flow		=	636	pcu
Co	= (1.5*L+5)/(1-Y)	=	72.5	sec
Cm	= L/(1-Y)	=	44.3	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	275.8	%
Cp	= 0.9*L/(0.9-Y)	=	45.3	sec
Ymax	= 1-L/C	=	0.657	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	257.2	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		49	6
P2	C	6.8	5	6		31	6
P3	B	4.5	5	4		23	4
P4	A,C	6.8	5	6		53	6

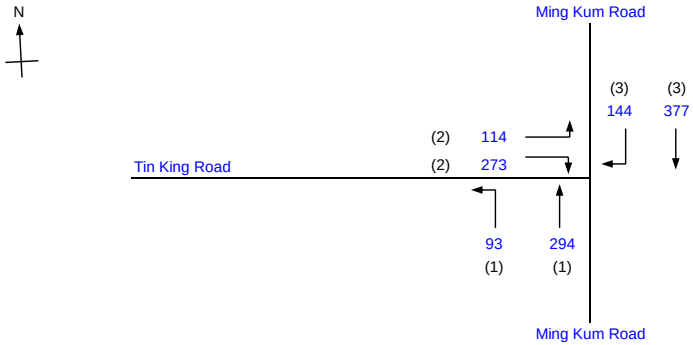
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	46	33		79	0.59	2007			2007	0.039			17	11	0.385	12	46
SA	A	3.80	1	1				2135		84		84	0.00	2135			2135	0.039	0.039		17	11	0.385	12	45
LT	B	3.50	2	1	15		N	1965	98			98	1.00	1786			1786	0.055	0.055		23	17	0.347	12	40
RT	B	3.50	2	1	21			2105			94	94	1.00	1965			1965	0.048			21	17	0.304	12	39
SA	C	3.50	3	1			N	1965		141		141	0.00	1965			1965	0.072			31	19	0.409	18	39
SA,RT	C	3.50	3	1	18			2105		13	128	141	0.91	1957			1957	0.072	0.072		31	19	0.409	18	39
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

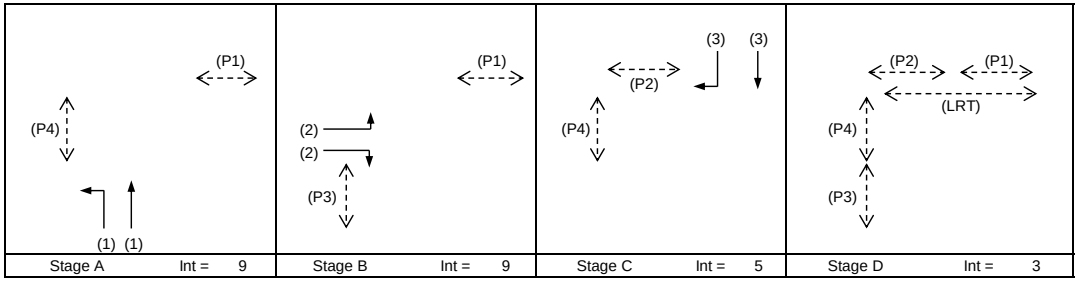
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J8: Tin King Road / Ming Kum Road	**2019 AM**	Checked By:	MM	Dec-20
2019 AM Observed Peak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.363	
Loss time		L =	37	sec
Total Flow		=	1295	pcu
Co	= (1.5*L+5)/(1-Y)	=	95.0	sec
Cm	= L/(1-Y)	=	58.1	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	71.4	%
Cp	= 0.9*L/(0.9-Y)	=	62.0	sec
Ymax	= 1-L/C	=	0.657	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	62.9	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		40	6
P2	C	6.8	5	6		26	6
P3	B	4.5	5	4		12	4
P4	A,C	6.8	5	6		49	6

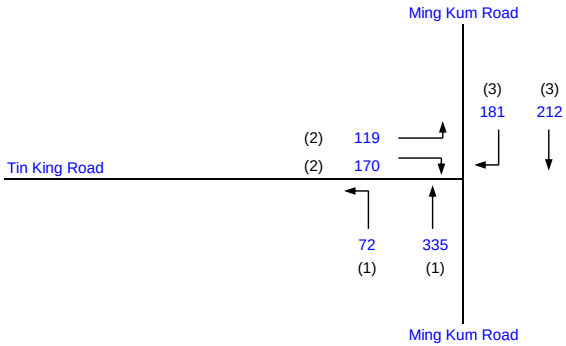
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	93	95		188	0.49	2022			2022	0.093			18	16	0.628	24	48
SA	A	3.80	1	1				2135		199		199	0.00	2135			2135	0.093	0.093		18	16	0.628	30	48
LT	B	3.50	2	1	15		N	1965	114			114	1.00	1786			1786	0.064	0.139		12	26	0.264	12	31
RT	B	3.50	2	1	21			2105			273	273	1.00	1965			1965	0.139			27	26	0.578	36	37
SA	C	3.50	3	1			N	1965		257		257	0.00	1965			1965	0.131			26	23	0.615	36	41
SA,RT	C	3.50	3	1	18			2105		119	144	264	0.55	2013			2013	0.131	0.131		26	23	0.615	36	41
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

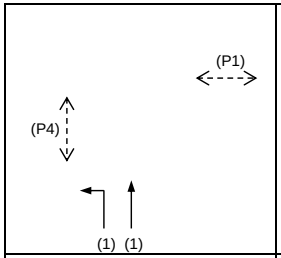
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TRAFFIC SIGNAL CALCULATION

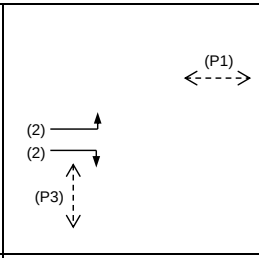
			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Dec-20
J8: Tin King Road / Ming Kum Road	**2019 PM**	Checked By:	MM	Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Dec-20



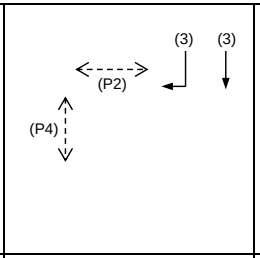
			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.284	
Loss time		L =	37	sec
Total Flow		=	1089	pcu
Co	= (1.5*L+5)/(1-Y)	=	84.5	sec
Cm	= L/(1-Y)	=	51.7	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	119.0	%
Cp	= 0.9*L/(0.9-Y)	=	54.1	sec
Ymax	= 1-L/C	=	0.657	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	108.2	%



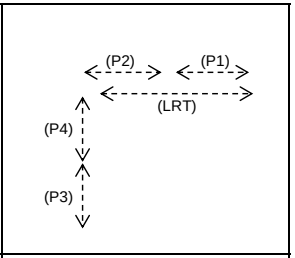
Stage A Int = 9



Stage B Int = 9



Stage C Int = 5



Stage D Int = 3

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		50	6
P2	C	6.8	5	6		25	6
P3	B	4.5	5	4		17	4
P4	A,C	6.8	5	6		54	6

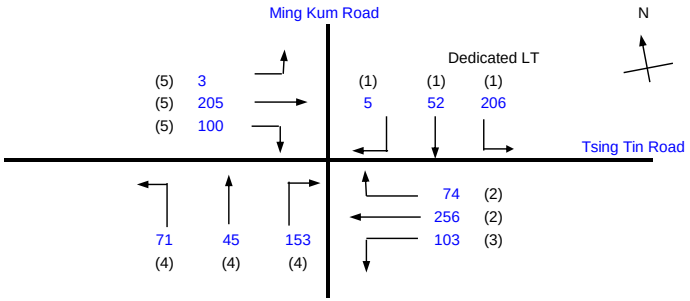
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	72	127		199	0.36	2043			2043	0.098			24	19	0.554	24	42
SA	A	3.80	1	1				2135		208		208	0.00	2135			2135	0.098	0.098		24	19	0.554	30	42
LT	B	3.50	2	1	15		N	1965	119			119	1.00	1786			1786	0.066	0.087		17	22	0.326	12	35
RT	B	3.50	2	1	21			2105			170	170	1.00	1965			1965	0.087			22	22	0.425	24	37
SA	C	3.50	3	1			N	1965		197		197	0.00	1965			1965	0.100			25	24	0.450	24	36
SA,RT	C	3.50	3	1	18			2105		15	181	196	0.92	1955			1955	0.100	0.100		25	24	0.450	24	36
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

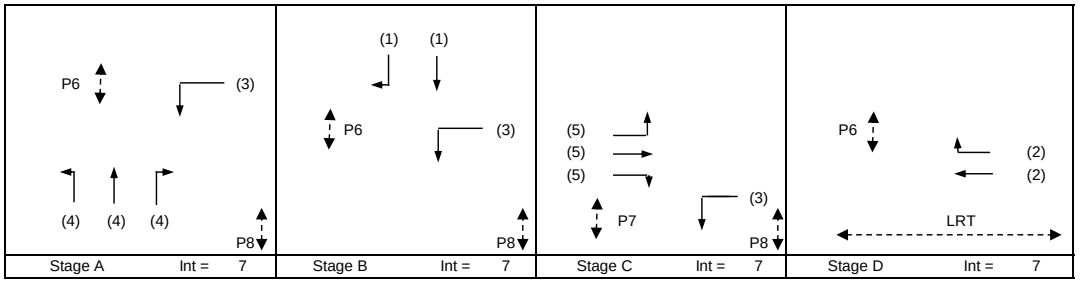
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2019 CM**		
J9: Tsing Tin Road / Ming Kum Road	PROJECT NO.: 81460	Prepared By:	JL Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows	FILENAME : J9_Tsing Tin Road_Ming Kum Road_S.xls	Checked By:	MM Dec-20
		Reviewed By:	OC Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	145	sec
Sum(y)		Y =	0.246	
Loss time		L =	24	sec
Total Flow		=	1066	pcu
Co	= (1.5*L+5)/(1-Y)	=	54.4	sec
Cm	= L/(1-Y)	=	31.8	sec
Yult		=	0.720	
R.C.ult	= (Yult-Y)/Y*100%	=	192.3	%
Cp	= 0.9*L/(0.9-Y)	=	33.0	sec
Ymax	= 1-L/C	=	0.834	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	205	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		107	8
P7	C	5	5	4	5	12	4
P8	A,B,C	8	5	7		41	7

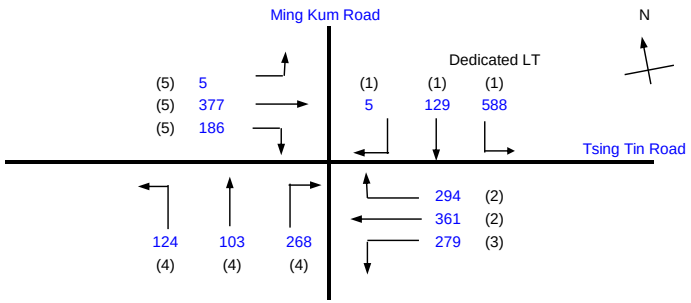
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				24					
LT	A	3.30	4	1	12		N	1945	71			71	1.00	1729			1729	0.041			20	18	0.328	12	56
SA,RT	A	3.30	4	1	18			2085		45	61	106	0.00	2085			2085	0.051	0.051		25	18	0.411	18	57
RT	A	3.30	4	1	16			2085			92	92	1.66	1804			1804	0.051			25	18	0.411	18	58
LT	A,B,C	3.50	3	1	21		N	1965	103			103	1.00	1834			1834	0.056			28	62	0.131	12	23
SA	B	3.30	1	2			N	4030		52		52	0.00	4030			4030	0.013	0.013		6	14	0.134	3	55
RT	B	3.30	1	1	20			2085			5	5	1.00	1940			1940	0.002			1	14	0.024	0	54
LT,SA	C	3.40	5	1	13		N	1955	3	97		100	0.03	1948			1948	0.052			25	16	0.467	18	61
SA,RT	C	3.40	5	1	15			2095		108	0	108	0.00	2094			2094	0.052	0.052		25	16	0.467	18	61
RT	C	3.40	5	1	18			2095			100	100	1.00	1934			1934	0.052			25	16	0.467	18	61
SA	D	3.40	2	1			N	1955		256		256	0.00	1955			1955	0.131	0.131		64	69	0.275	30	21
RT	D	3.40	2	2	18		N	4050			74	74	1.00	3738			3738	0.020			10	69	0.041	3	18

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

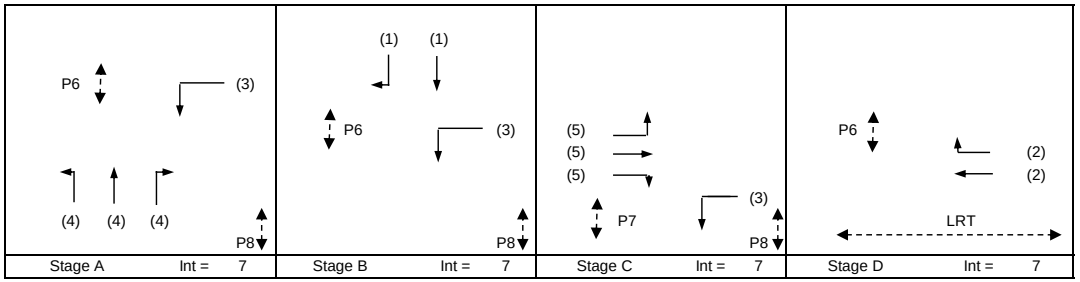
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TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2019 AM**		
J9: Tsing Tin Road / Ming Kum Road	PROJECT NO.: 81460	Prepared By:	JL Dec-20
2019 AM Observed Peak Hour Traffic Flows (Weekday)	FILENAME : J9_Tsing Tin Road_Ming Kum Road_S.xls	Checked By:	MM Dec-20
		Reviewed By:	OC Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	145	sec
Sum(y)		Y =	0.446	
Loss time		L =	24	sec
Total Flow		=	2131	pcu
Co	= (1.5*L+5)/(1-Y)	=	74.0	sec
Cm	= L/(1-Y)	=	43.3	sec
Yult		=	0.720	
R.C.ult	= (Yult-Y)/Y*100%	=	61.5	%
Cp	= 0.9*L/(0.9-Y)	=	47.6	sec
Ymax	= 1-L/C	=	0.834	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	68	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		107	8
P7	C	5	5	4	5	12	4
P8	A,B,C	8	5	7		41	7

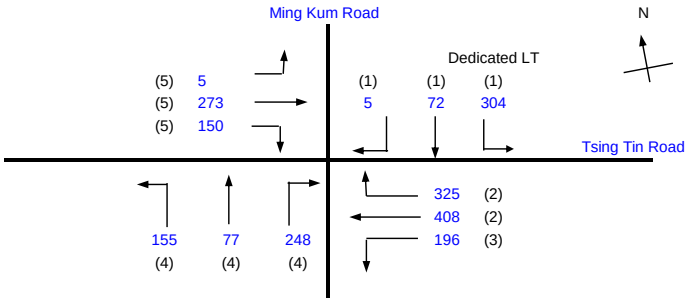
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				24					
LT	A	3.30	4	1	12		N	1945	124			124	1.00	1729			1729	0.072			19	18	0.534	24	61
SA,RT	A	3.30	4	1	18			2085		103	176	279	0.00	2085			2085	0.134	0.134		36	18	0.534	48	46
RT	A	3.30	4	1	16			2085			92	92	2.92	1637			1637	0.056			15	18	0.534	18	66
LT	A,B,C	3.50	3	1	21		N	1965	279			279	1.00	1834			1834	0.152			41	62	0.534	48	43
SA	B	3.30	1	2			N	4030		129		129	0.00	4030			4030	0.032	0.032		9	14	0.534	12	67
RT	B	3.30	1	1	20			2085			5	5	1.00	1940			1940	0.003			1	14	0.534	0	257
LT,SA	C	3.40	5	1	13		N	1955	5	180		185	0.03	1949			1949	0.095			26	16	0.534	36	54
SA,RT	C	3.40	5	1	15			2095		197	2	199	0.01	2093			2093	0.095	0.095		26	16	0.534	36	54
RT	C	3.40	5	1	18			2095			184	184	1.00	1934			1934	0.095			26	16	0.534	36	54
SA	D	3.40	2	1			N	1955		361		361	0.00	1955			1955	0.185	0.185		50	69	0.534	54	37
RT	D	3.40	2	2	18		N	4050			294	294	1.00	3738			3738	0.079			21	69	0.534	30	55

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

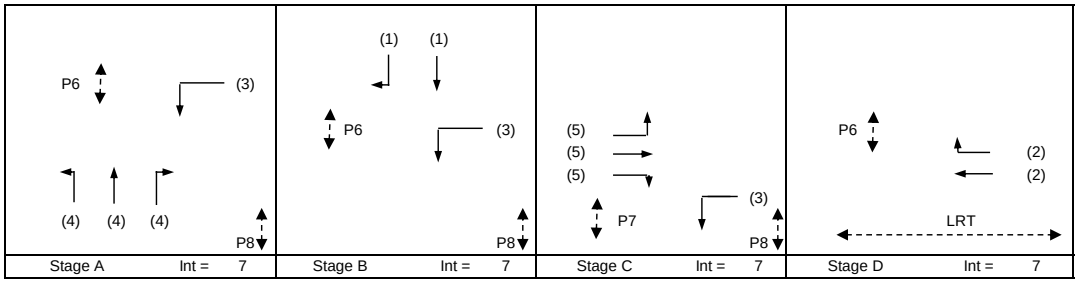
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	2019 PM		
J9: Tsing Tin Road / Ming Kum Road	PROJECT NO.: 81460	Prepared By:	JL Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)	FILENAME : J9_Tsing Tin Road_Ming Kum Road_S.xls	Checked By:	MM Dec-20
		Reviewed By:	OC Dec-20



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	145	sec
Sum(y)		Y =	0.410	
Loss time		L =	24	sec
Total Flow		=	1914	pcu
Co	= (1.5*L+5)/(1-Y)	=	69.5	sec
Cm	= L/(1-Y)	=	40.7	sec
Yult		=	0.720	
R.C.ult	= (Yult-Y)/Y*100%	=	75.5	%
Cp	= 0.9*L/(0.9-Y)	=	44.1	sec
Ymax	= 1-L/C	=	0.834	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	83	%

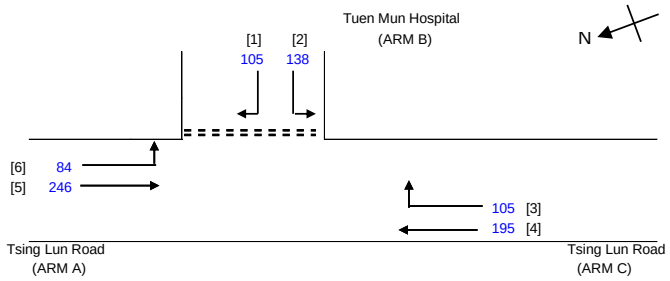


Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		107	8
P7	C	5	5	4	5	12	4
P8	A,B,C	8	5	7		41	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				24					
LT	A	3.30	4	1	12		N	1945	155			155	1.00	1729			1729	0.090			26	18	0.492	30	53
SA,RT	A	3.30	4	1	18			2085		77	156	233	0.00	2085			2085	0.112	0.112		33	18	0.492	42	47
RT	A	3.30	4	1	16			2085			92	92	2.69	1665			1665	0.055			16	18	0.492	18	63
LT	A,B,C	3.50	3	1	21		N	1965	196			196	1.00	1834			1834	0.107			32	62	0.492	36	49
SA	B	3.30	1	2			N	4030		72		72	0.00	4030			4030	0.018	0.018		5	14	0.492	6	72
RT	B	3.30	1	1	20			2085			5	5	1.00	1940			1940	0.003			1	14	0.492	0	214
LT,SA	C	3.40	5	1	13		N	1955	5	134		140	0.04	1947			1947	0.072			21	16	0.492	24	57
SA,RT	C	3.40	5	1	15			2095		139	11	150	0.07	2080			2080	0.072	0.072		21	16	0.492	30	56
RT	C	3.40	5	1	18			2095			139	139	1.00	1934			1934	0.072			21	16	0.492	24	57
SA	D	3.40	2	1			N	1955		408		408	0.00	1955			1955	0.208	0.208		61	69	0.492	54	29
RT	D	3.40	2	2	18		N	4050			325	325	1.00	3738			3738	0.087			26	69	0.492	30	51

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2019 CM**	PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	Dec-20



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.03	(metres)
W cr	=	0	(metres)
q a-b	=	84	(pcu/hr)
q a-c	=	246	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	12.00	(metres)
Vr c-b	=	32.5	(metres)
q c-a	=	195	(pcu/hr)
q c-b	=	104.5	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	41.1	(metres)
Vr b-a	=	36.7	(metres)
Vr b-c	=	36.7	(metres)
q b-a	=	105	(pcu/hr)
q b-c	=	138	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.0962118
E	=	1.1728455
F	=	1.6443391
Y	=	0.653965
F for (Qb-ac)	=	0.5670103

THE CAPACITY OF MOVEMENT :

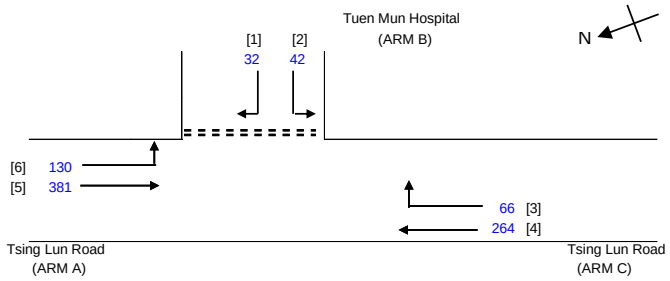
Q b-a	=	544			
Q b-c	=	796	Q b-c (O) =	757.6	
Q c-b	=	1096			
Q b-ac	=	663			
TOTAL FLOW	=	871.75	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1930
DFC b-c	=	0.1727
DFC c-b	=	0.0953
DFC b-c (share lane)	=	0.3658

CRITICAL DFC = 0.37

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2019 AM**	PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	Dec-20
2019 AM Observed Peak Hour Traffic Flows (Weekday)		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	Dec-20



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.03	(metres)
W cr	=	0	(metres)
q a-b	=	130	(pcu/hr)
q a-c	=	381	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	12.00	(metres)
Vr c-b	=	32.5	(metres)
q c-a	=	264	(pcu/hr)
q c-b	=	66.04	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	41.1	(metres)
Vr b-a	=	36.7	(metres)
Vr b-c	=	36.7	(metres)
q b-a	=	32	(pcu/hr)
q b-c	=	42	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.0962118
E	=	1.1728455
F	=	1.6443391
Y	=	0.653965
F for (Qb-ac)	=	0.5670103

THE CAPACITY OF MOVEMENT :

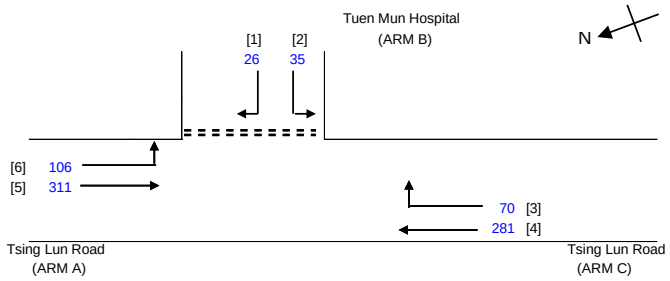
Q b-a	=	507			
Q b-c	=	753	Q b-c (O) =	741	
Q c-b	=	1025			
Q b-ac	=	622.3			
TOTAL FLOW	=	915.6860912	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0637
DFC b-c	=	0.0562
DFC c-b	=	0.0644
DFC b-c (share lane)	=	0.1199

CRITICAL DFC = 0.12

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2019 PM**	PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	Dec-20



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.03	(metres)
W cr	=	0	(metres)
q a-b	=	106	(pcu/hr)
q a-c	=	311	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	12.00	(metres)
Vr c-b	=	32.5	(metres)
q c-a	=	281	(pcu/hr)
q c-b	=	70.16	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	41.1	(metres)
Vr b-a	=	36.7	(metres)
Vr b-c	=	36.7	(metres)
q b-a	=	26	(pcu/hr)
q b-c	=	35	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.0962118
E	=	1.1728455
F	=	1.6443391
Y	=	0.653965
F for (Qb-ac)	=	0.5670103

THE CAPACITY OF MOVEMENT :

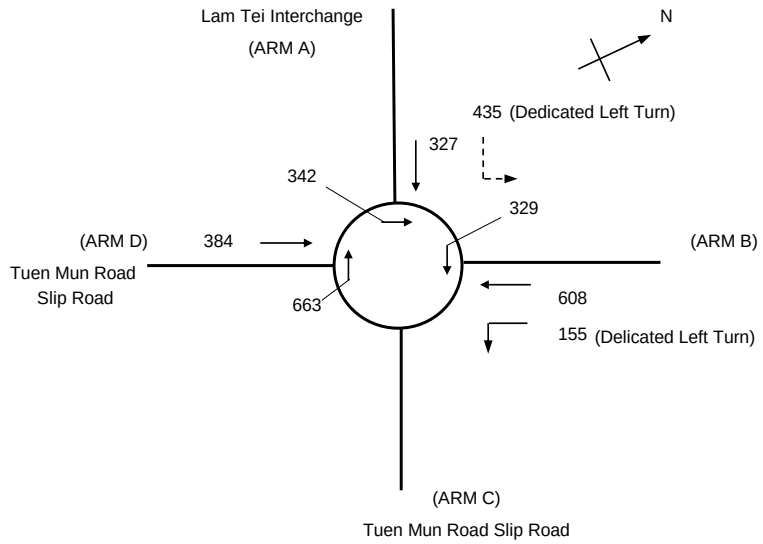
Q b-a	=	523			
Q b-c	=	775	Q b-c (O) =	765.2	
Q c-b	=	1062			
Q b-ac	=	641.2			
TOTAL FLOW	=	829.2190926	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0505
DFC b-c	=	0.0446
DFC c-b	=	0.0661
DFC b-c (share lane)	=	0.0951

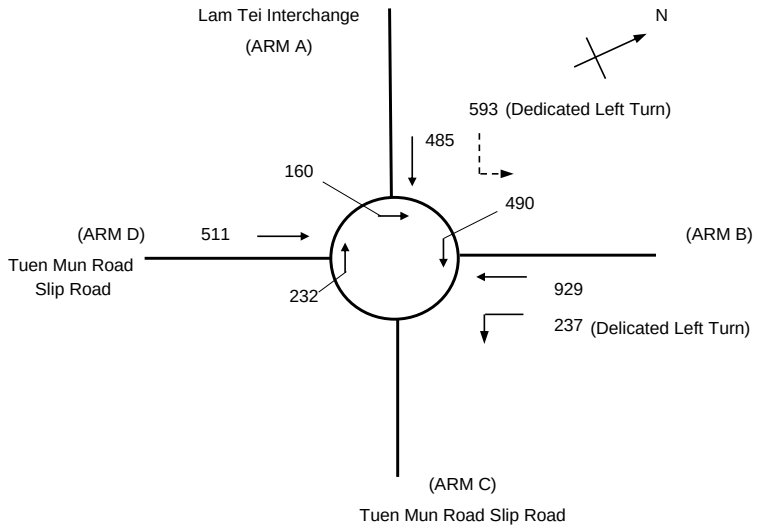
CRITICAL DFC = 0.10

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terri		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J11 : Lam Tei Interchange	**2019 CM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	Dec-20



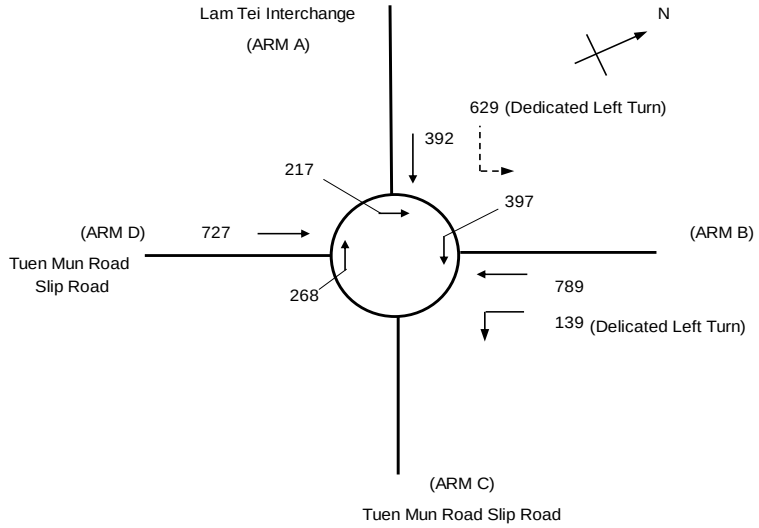
ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	6.0	7.9		6.4			
E	=	Entry width (m)	7.5	10.2		8.0			
L	=	Effective length of flare (m)	9.5	3.0		18.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	43.0	43.0		43.0			
A	=	Entry angle (degree)	30.0	29.0		28.0			
Q	=	Entry flow (pcu/h)	327	608		384			
Qc	=	Circulating flow across entry (pcu/h)	342	329		663			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.25	1.23		0.14			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.04			
X2	=	V + ((E-V)/(1+2S))	7.00	8.57		7.65			
M	=	EXP((D-60)/10)	0	0		0			
F	=	303*X2	2120	2596		2317			
Td	=	1+(0.5/(1+M))	1.42	1.42		1.42			
Fc	=	0.21*Td(1+0.2*X2)	0.72	0.81		0.76			
Qe	=	K(F-Fc*Qc)	1937	2395		1883	Total In Sum =	1318	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.17	0.25		0.20	DFC of Critical Approach =	0.25	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terri	PROJECT NO.: 81460		PREPARED BY:	JL	Dec-20
J11 : Lam Tei Interchange	**2019 AM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 AM Observed Peak Hour Traffic Flows (Weekday)		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	Dec-20



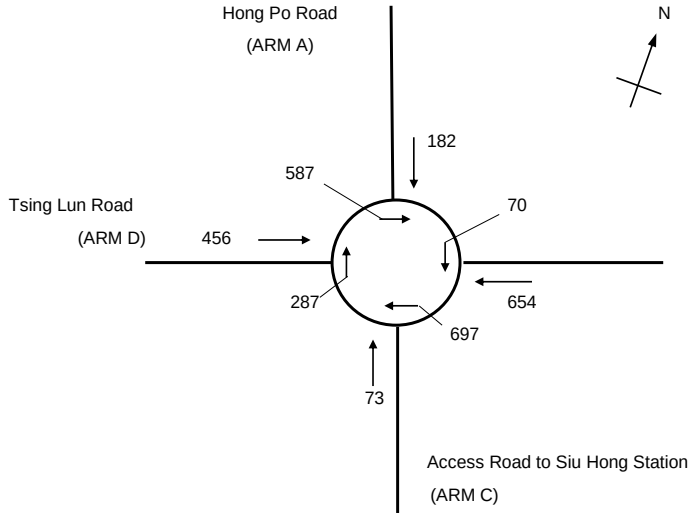
ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	6.0	7.9		6.4			
E	=	Entry width (m)	7.5	10.2		8.0			
L	=	Effective length of flare (m)	9.5	3.0		18.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	43.0	43.0		43.0			
A	=	Entry angle (degree)	30.0	29.0		28.0			
Q	=	Entry flow (pcu/h)	485	929		511			
Qc	=	Circulating flow across entry (pcu/h)	160	490		232			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.25	1.23		0.14			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.04			
X2	=	V + ((E-V)/(1+2S))	7.00	8.57		7.65			
M	=	EXP((D-60)/10)	0	0		0			
F	=	303*X2	2120	2596		2317			
Td	=	1+(0.5/(1+M))	1.42	1.42		1.42			
Fc	=	0.21*Td(1+0.2*X2)	0.72	0.81		0.76			
Qe	=	K(F-Fc*Qc)	2072	2261		2220	Total In Sum =	1924	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.23	0.41		0.23	DFC of Critical Approach =	0.41	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terri		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J11 : Lam Tei Interchange	**2019 PM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	Dec-20



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	6.0	7.9		6.4			
E	=	Entry width (m)	7.5	10.2		8.0			
L	=	Effective length of flare (m)	9.5	3.0		18.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	43.0	43.0		43.0			
A	=	Entry angle (degree)	30.0	29.0		28.0			
Q	=	Entry flow (pcu/h)	392	789		727			
Qc	=	Circulating flow across entry (pcu/h)	217	397		268			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.25	1.23		0.14			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.04			
X2	=	V + ((E-V)/(1+2S))	7.00	8.57		7.65			
M	=	EXP((D-60)/10)	0	0		0			
F	=	303*X2	2120	2596		2317			
Td	=	1+(0.5/(1+M))	1.42	1.42		1.42			
Fc	=	0.21*Td(1+0.2*X2)	0.72	0.81		0.76			
Qe	=	K(F-Fc*Qc)	2030	2338		2192	Total In Sum =	1909	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.19	0.34		0.33	DFC of Critical Approach =	0.34	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terri		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J12 : Tsing Lun Road / Hong Po Road	**2019 CM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 Ching Ming Observed Peak Hour Traffic Flows		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	Dec-20

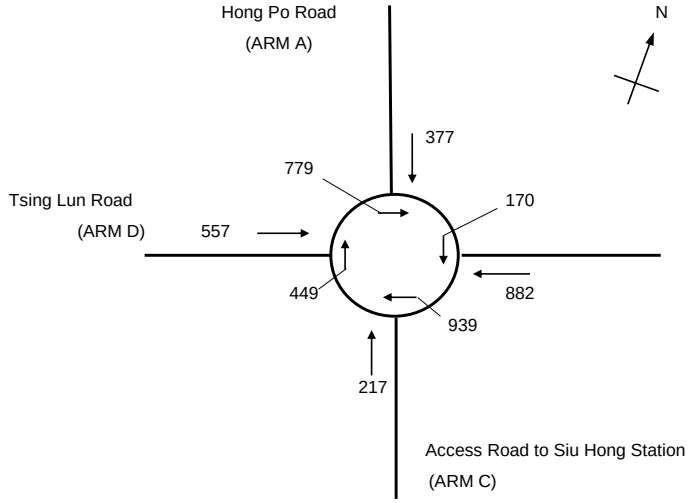


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.8	3.5	3.3	4.2
E	=	Entry width (m)	9.0	9.5	8.4	7.4
L	=	Effective length of flare (m)	7.0	10.0	8.0	25.0
R	=	Entry radius (m)	30.0	12.0	35.0	42.0
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0
Q	=	Entry flow (pcu/h)	182	653.5	73	456
Qc	=	Circulating flow across entry (pcu/h)	587	69.5	697	287
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03
X2	=	V + ((E-V)/(1+2S))	4.42	5.6	4.93	6.47
M	=	EXP((D-60)/10)	12	12.2	12	12
F	=	303*X2	1338	1683.1	1495	1960
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50
Qe	=	K(F-Fc*Qc)	1058	1494.2	1135	1863
DFC	=	Design flow/Capacity = Q/Qe	0.17	0.4	0.06	0.24

Total In Sum = 1364 PCU

DFC of Critical Approach = 0.44

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terri		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J12 : Tsing Lun Road / Hong Po Road	**2019 AM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 AM Observed Peak Hour Traffic Flows (Weekday)		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	Dec-20

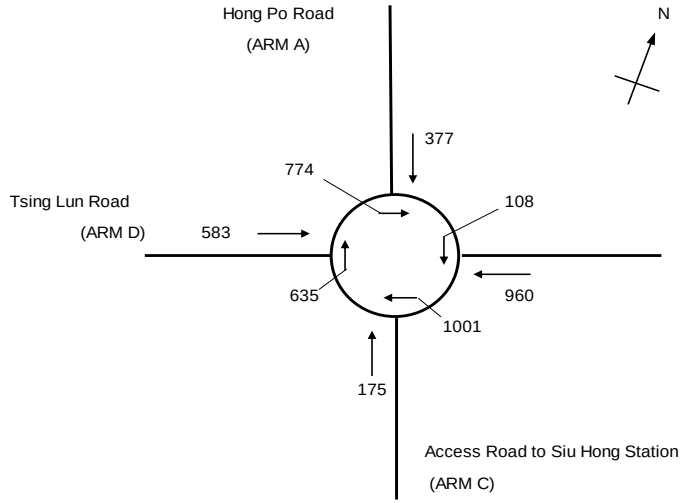


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.8	3.5	3.3	4.2
E	=	Entry width (m)	9.0	9.5	8.4	7.4
L	=	Effective length of flare (m)	7.0	10.0	8.0	25.0
R	=	Entry radius (m)	30.0	12.0	35.0	42.0
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0
Q	=	Entry flow (pcu/h)	377	882.2	217	557
Qc	=	Circulating flow across entry (pcu/h)	779	170.3	939	449
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03
X2	=	V + ((E-V)/(1+2S))	4.42	5.6	4.93	6.47
M	=	EXP((D-60)/10)	12	12.2	12	12
F	=	303*X2	1338	1683.1	1495	1960
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50
Qe	=	K(F-Fc*Qc)	982	1452.2	1035	1780
DFC	=	Design flow/Capacity = Q/Qe	0.38	0.6	0.21	0.31

Total In Sum = 2033 PCU

DFC of Critical Approach = 0.61

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terri		PROJECT NO.: 81460	PREPARED BY:	JL	Dec-20
J12 : Tsing Lun Road / Hong Po Road	**2019 PM**	FILENAME :	CHECKED BY:	MM	Dec-20
2019 PM Observed Peak Hour Traffic Flows (Weekday)		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	Dec-20



ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.8	3.5	3.3	4.2
E	=	Entry width (m)	9.0	9.5	8.4	7.4
L	=	Effective length of flare (m)	7.0	10.0	8.0	25.0
R	=	Entry radius (m)	30.0	12.0	35.0	42.0
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0
Q	=	Entry flow (pcu/h)	377	959.6	175	583
Qc	=	Circulating flow across entry (pcu/h)	774	108.3	1001	635
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03
X2	=	V + ((E-V)/(1+2S))	4.42	5.6	4.93	6.47
M	=	EXP((D-60)/10)	12	12.2	12	12
F	=	303*X2	1338	1683.1	1495	1960
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50
Qe	=	K(F-Fc*Qc)	984	1478.0	1010	1685
DFC	=	Design flow/Capacity = Q/Qe	0.38	0.6	0.17	0.35

Total In Sum = 2095 PCU

DFC of Critical Approach = 0.65

Appendix B

Descriptions of Level of Services for Footways

Appendix B

Description of Level-of-Service (LOS)

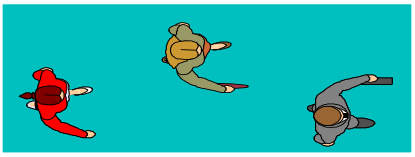
LOS	Flow Rate (ped/min/m)	Description
A	≤ 16	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
B	16 - 23	Sufficient space is provided for pedestrians to freely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

Graphical Presentation of LOS

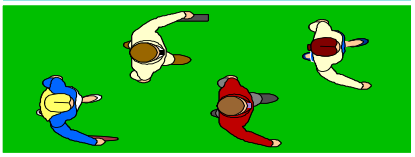
Level A
>3.25



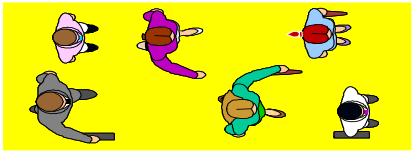
Level B
3.25-2.30



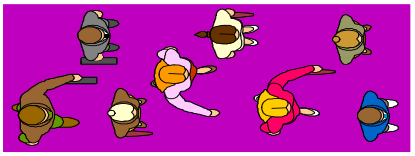
Level C
2.30-1.39



Level D
1.39-



Level E
0.93-

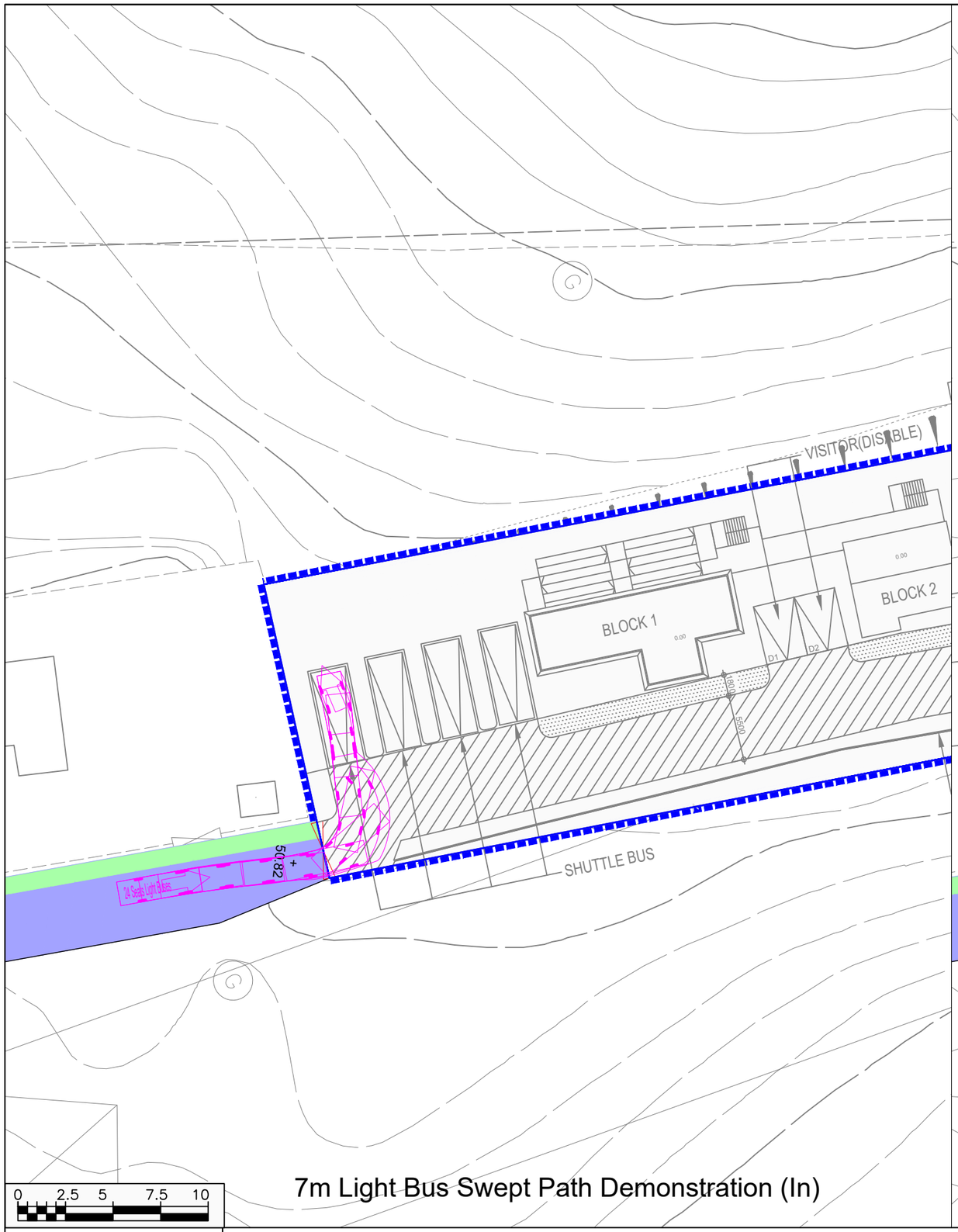


Level F
<0.46

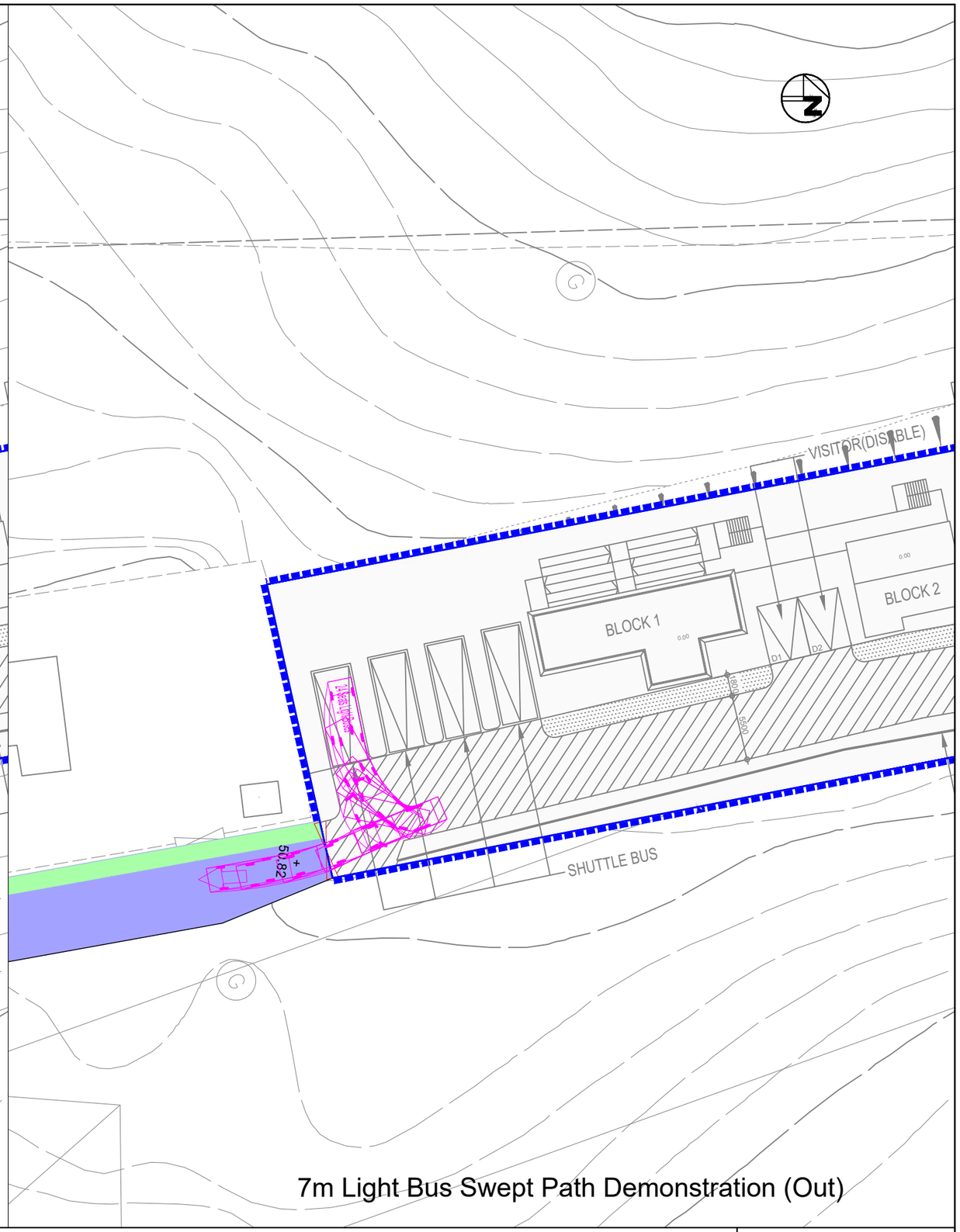


Appendix C

Swept Path Assessment



7m Light Bus Swept Path Demonstration (In)



7m Light Bus Swept Path Demonstration (Out)

0 2.5 5 7.5 10

OZZO TECHNOLOGY

Date 27/11/2019

Scale 1:250

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

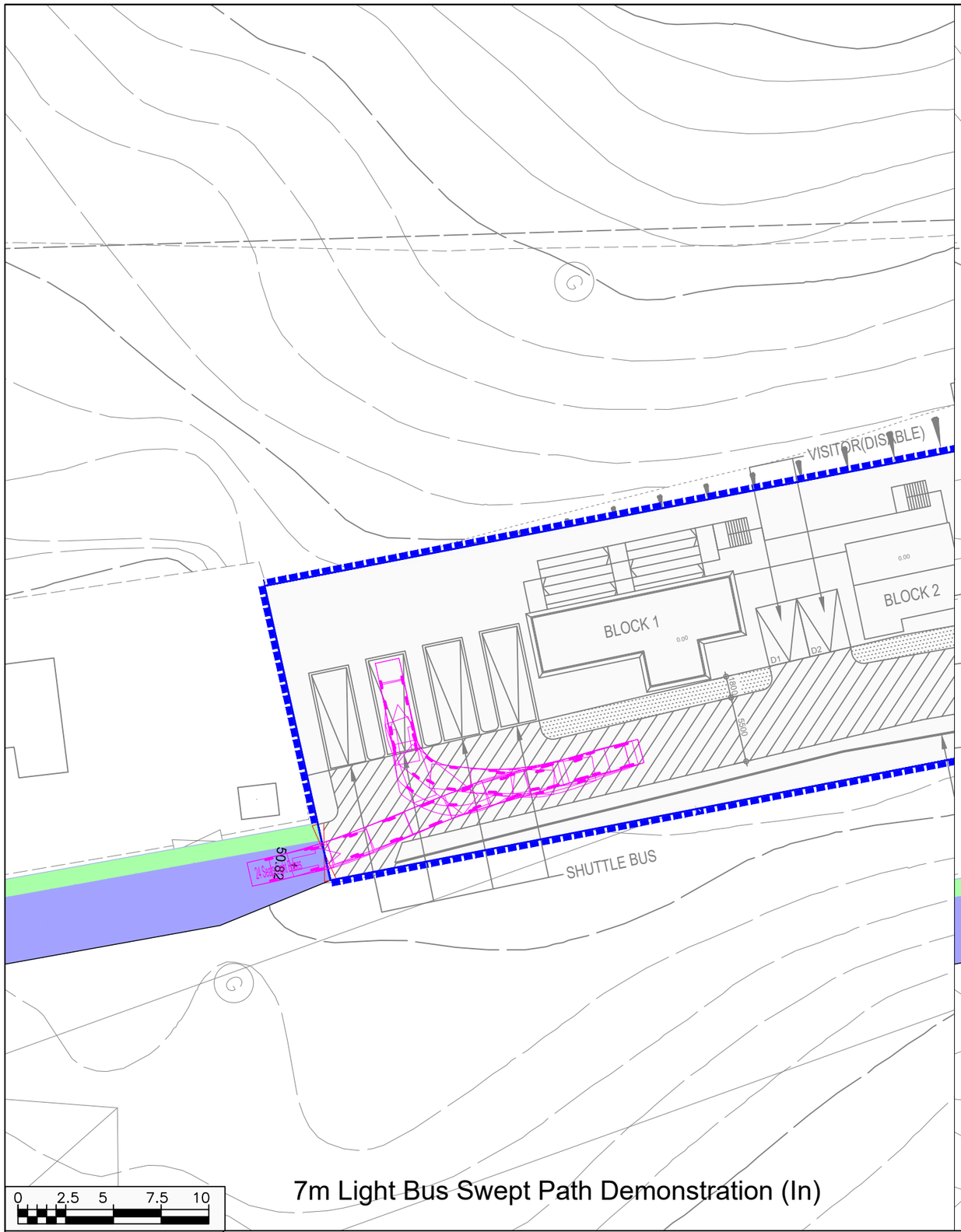
Swept Path Assessments - 1

天罡隆義

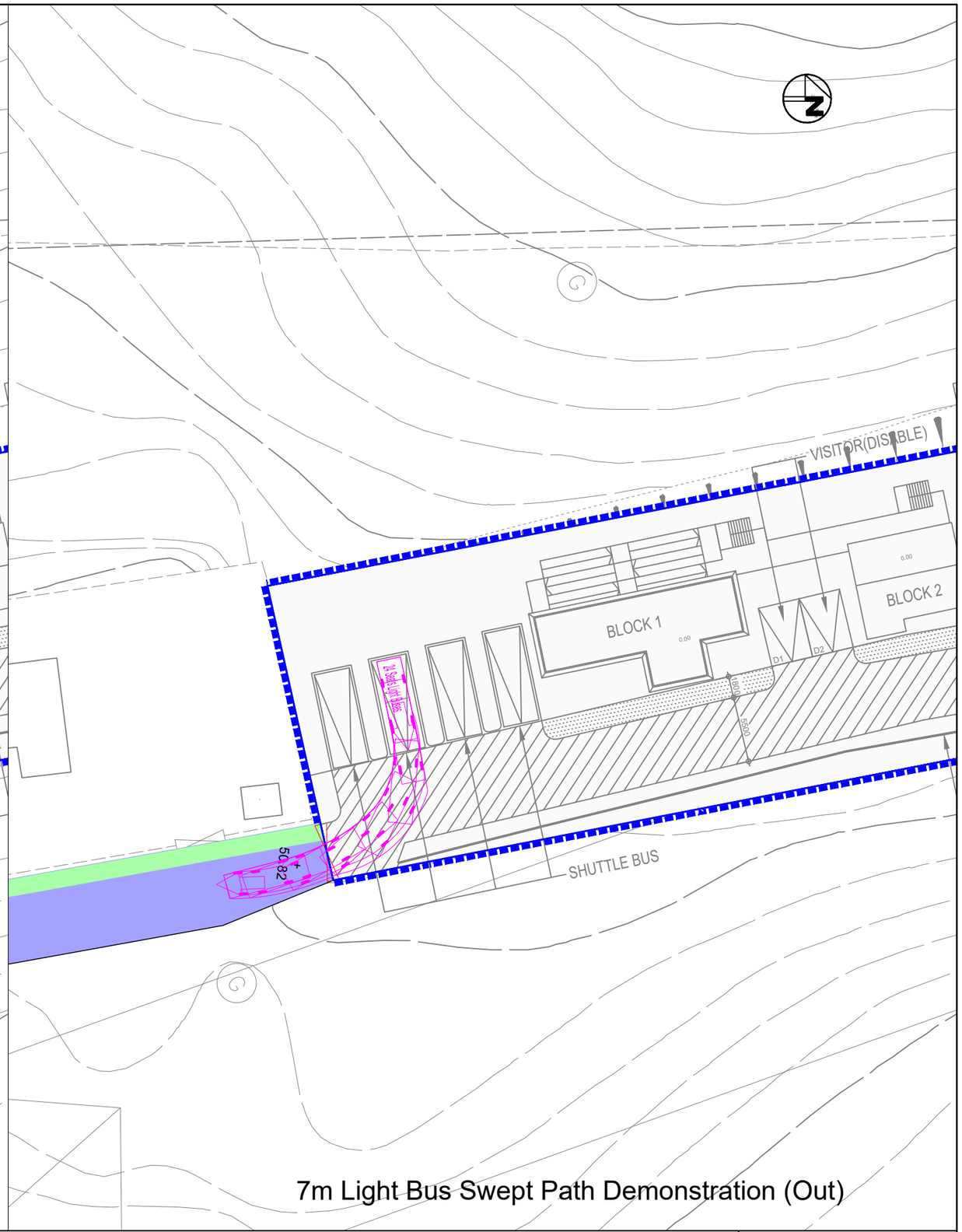
Project No. 81460

Rev. -

Dwg No. Appendix C-1



7m Light Bus Swept Path Demonstration (In)



7m Light Bus Swept Path Demonstration (Out)

OZZO TECHNOLOGY

Date 27/11/2019 | Scale 1:250

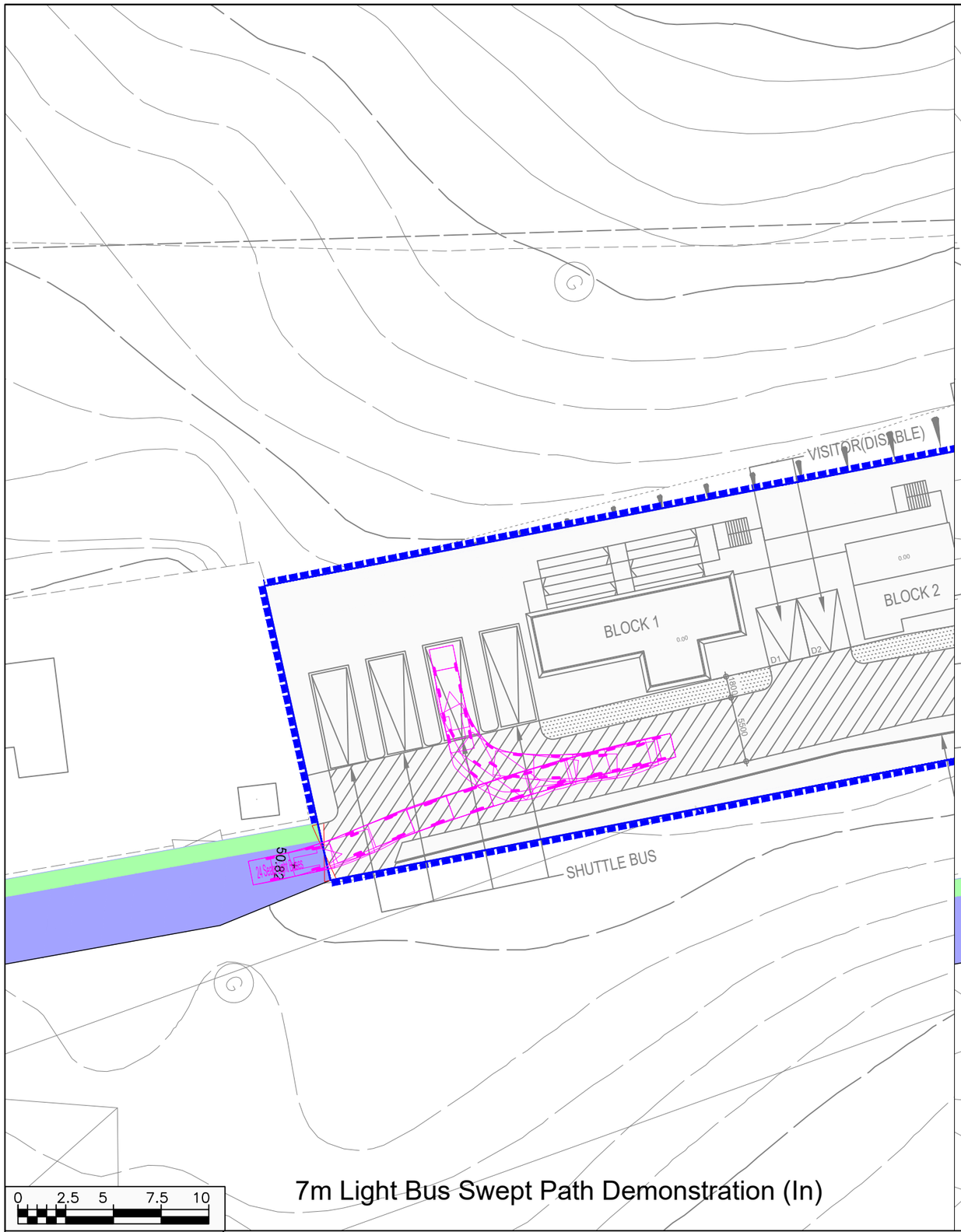
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Swept Path Assessments - 2

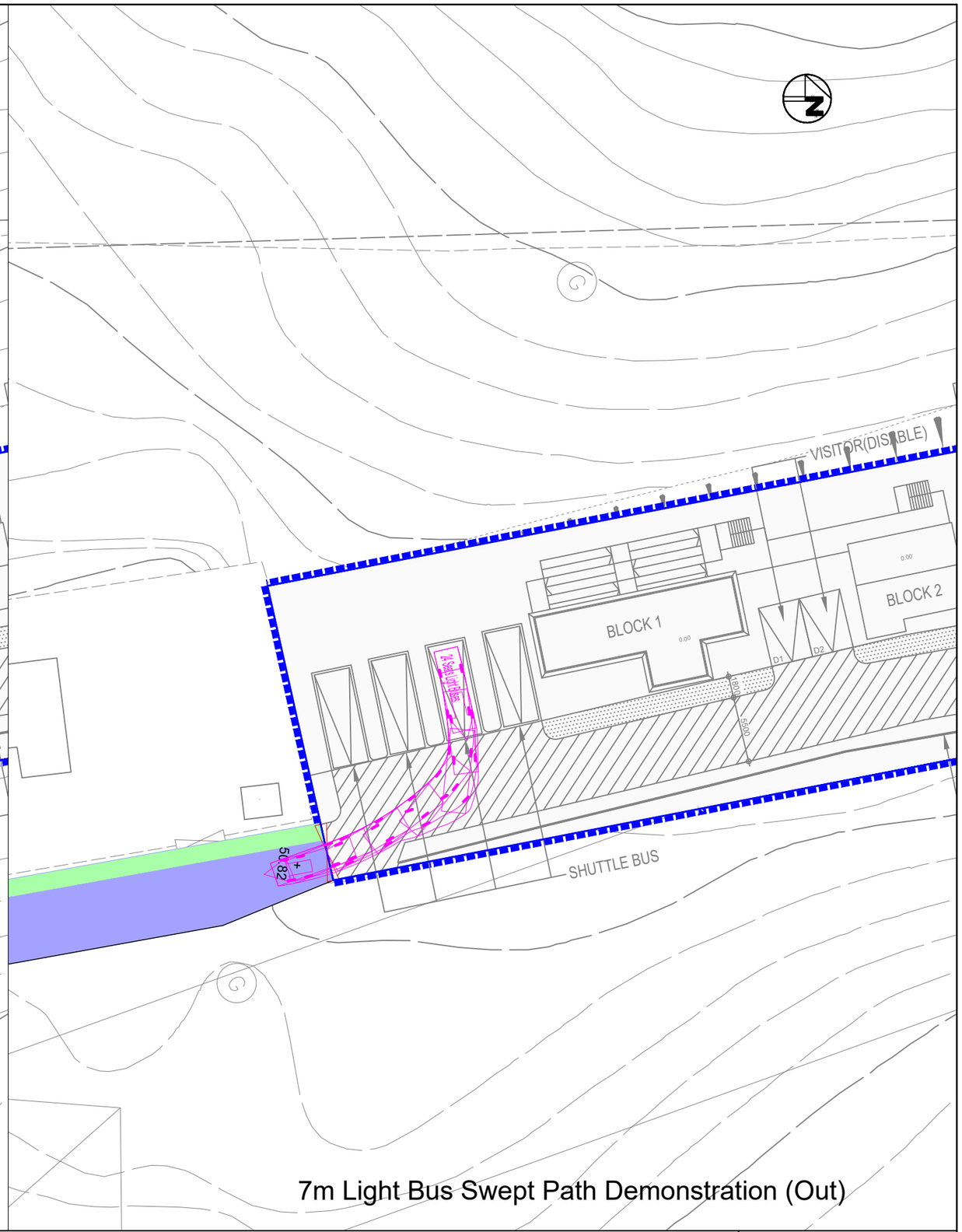
天罡隆義

Project No. 81460 | Rev. -

Dwg No. Appendix C-2



7m Light Bus Swept Path Demonstration (In)



7m Light Bus Swept Path Demonstration (Out)

OZZO TECHNOLOGY

Date 27/11/2019 | Scale 1:250

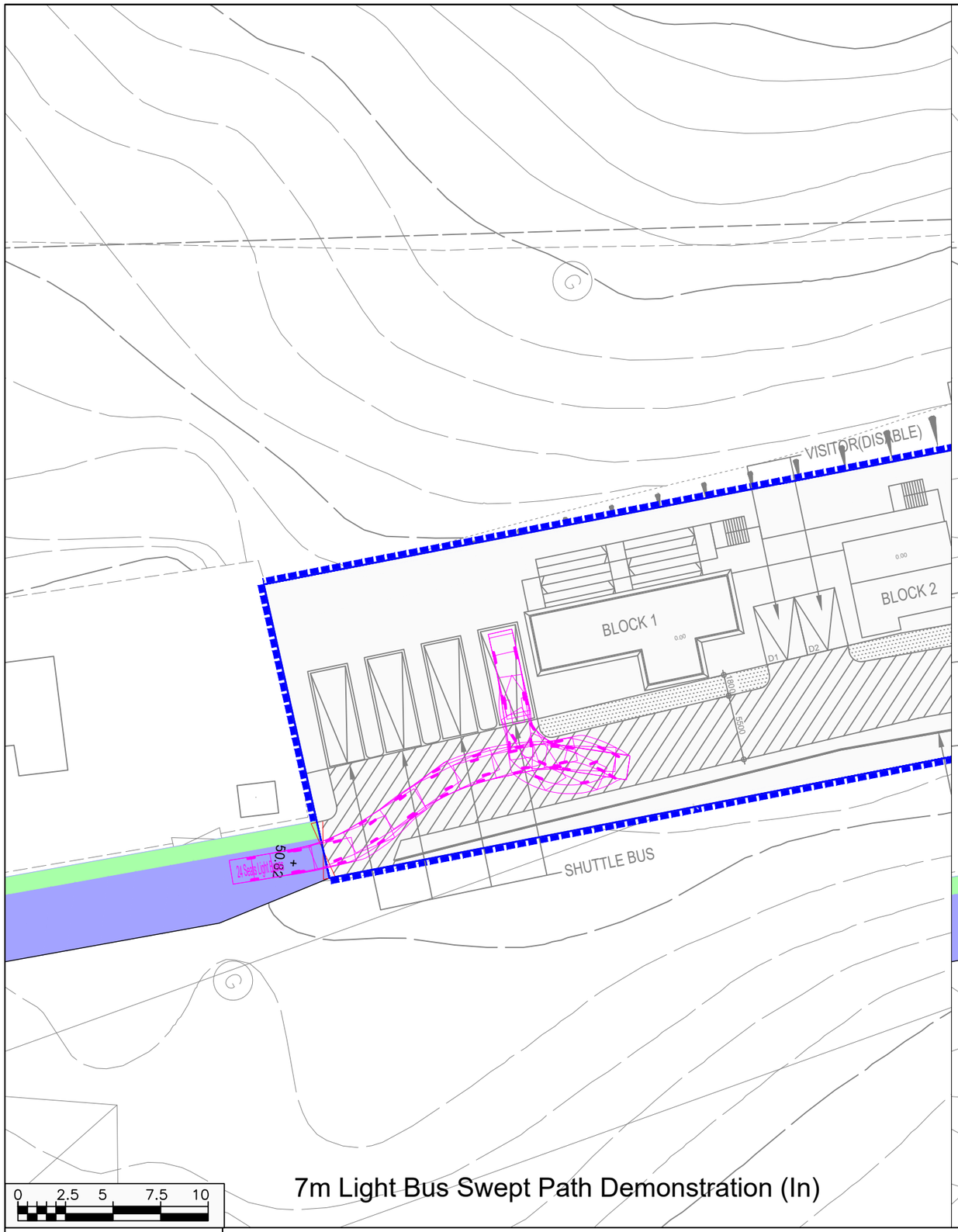
Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Swept Path Assessments - 3

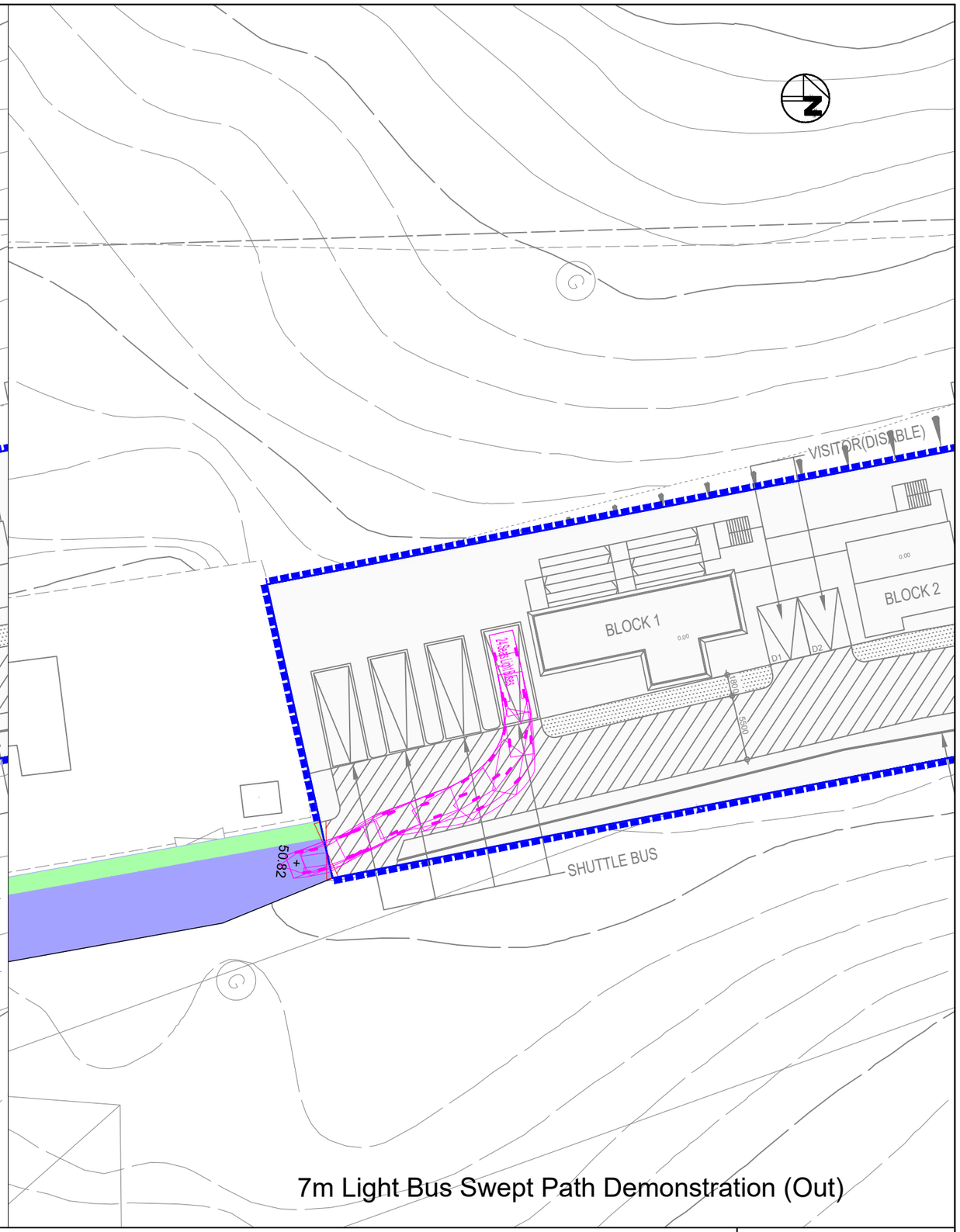
天罡隆義

Project No. 81460 | Rev. -

Dwg No. Appendix C-3



7m Light Bus Swept Path Demonstration (In)



7m Light Bus Swept Path Demonstration (Out)

OZZO TECHNOLOGY

Date 27/11/2019

Scale 1:250

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Swept Path Assessments - 4

天罡隆義

Project No. 81460

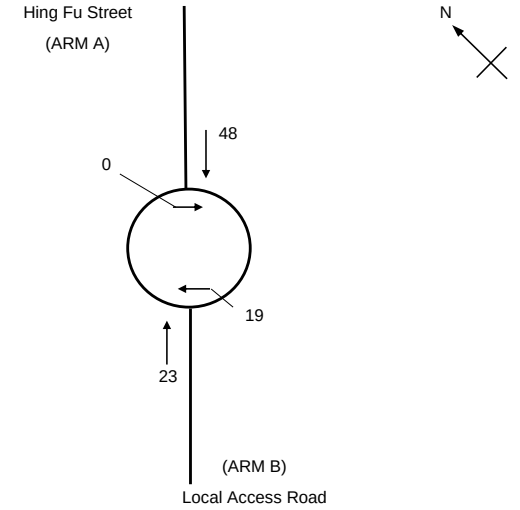
Rev. -

Dwg No. Appendix C-4

Appendix D

2028 Junction Calculation Sheets

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J1 : Hing Fu Street Roundabout	**2028 AM Ref**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	Feb-21

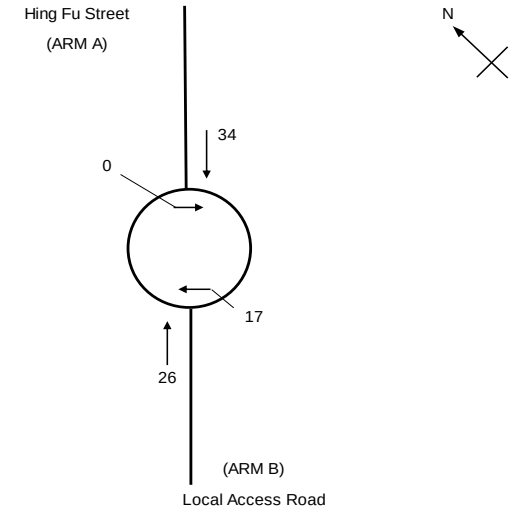


ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.5	2.2
E	=	Entry width (m)	3.4	3.5
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	35.0	58.0
Q	=	Entry flow (pcu/h)	48	23
Qc	=	Circulating flow across entry (pcu/	0	19
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	-0.21	2.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.93	0.79
X2	=	V + ((E-V)/(1+2S))	3.28	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	993	728
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.52	0.47
Qe	=	K(F-Fc*Qc)	927	567
DFC	=	Design flow/Capacity = Q/Qe	0.05	0.04

Total In Sum = 72 PCU

DFC of Critical Approach = 0.05

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J1 : Hing Fu Street Roundabout	**2028 PM Ref**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	Feb-21

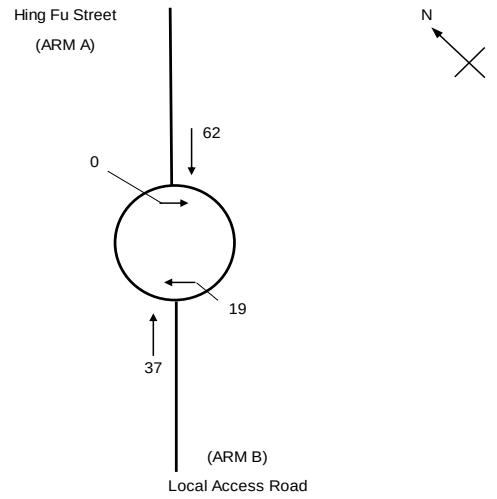


ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.5	2.2
E	=	Entry width (m)	3.4	3.5
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	35.0	58.0
Q	=	Entry flow (pcu/h)	34	26
Qc	=	Circulating flow across entry (pcu/	0	17
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	-0.21	2.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.93	0.79
X2	=	V + ((E-V)/(1+2S))	3.28	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	993	728
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.52	0.47
Qe	=	K(F-Fc*Qc)	927	568
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.04

Total In Sum = 60 PCU

DFC of Critical Approach = 0.04

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J1 : Hing Fu Street Roundabout	**2028 AM Des**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	Feb-21

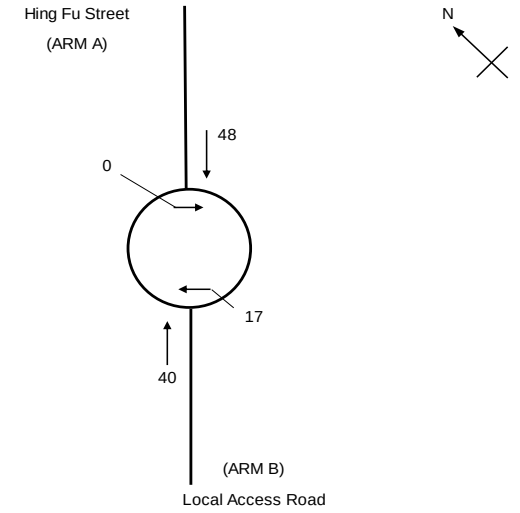


ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.5	2.2
E	=	Entry width (m)	3.4	3.5
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	35.0	58.0
Q	=	Entry flow (pcu/h)	62	37
Qc	=	Circulating flow across entry (pcu/h)	0	19
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	-0.21	2.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.93	0.79
X2	=	V + ((E-V)/(1+2S))	3.28	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	993	728
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.52	0.47
Qe	=	K(F-Fc*Qc)	927	567
DFC	=	Design flow/Capacity = Q/Qe	0.07	0.07

Total In Sum = 100 PCU

DFC of Critical Approach = 0.07

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J1 : Hing Fu Street Roundabout	**2028 PM Des**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	Feb-21



ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.5	2.2
E	=	Entry width (m)	3.4	3.5
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	35.0	58.0
Q	=	Entry flow (pcu/h)	48	40
Qc	=	Circulating flow across entry (pcu/	0	17
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	-0.21	2.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.93	0.79
X2	=	V + ((E-V)/(1+2S))	3.28	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	993	728
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.52	0.47
Qe	=	K(F-Fc*Qc)	927	568
DFC	=	Design flow/Capacity = Q/Qe	0.05	0.07

Total In Sum = 88 PCU

DFC of Critical Approach = 0.07

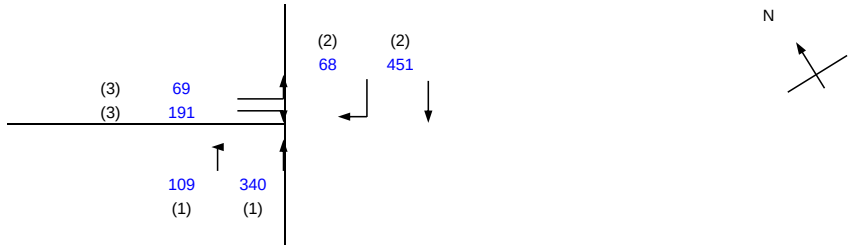
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

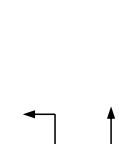
			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO.	Prepared By:	JL	Feb-21
J2: Tong Hang Road / Hing Kwai Street / Hing Fu Street	FILENAME :	Checked By:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)	J2_Hing Fu Street_Hing Kwai Street_P.xls	Reviewed By:	OC	Feb-21

2028 AM Ref (Signal)

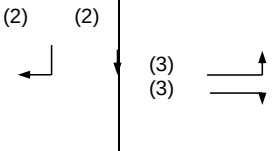
With Junction Improvement under Tuen Mun Area 54 developments (Agreement No. CE38/2011(CE))



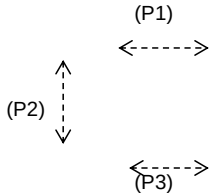
			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.339	
Loss time		L =	39	sec
Total Flow		=	1227	pcu
Co	= (1.5*L+5)/(1-Y)	=	96.1	sec
Cm	= L/(1-Y)	=	59.0	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	79.2	%
Cp	= 0.9*L/(0.9-Y)	=	62.6	sec
Ymax	= 1-L/C	=	0.639	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	69.6	%



Stage A Int = 6



Stage B Int = 6 | Stage C Int = 6



Stage D Int = 6

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.0	5	6		8	10
P2	D	7.0	5	6		8	10
P3	D	7.0	5	6		8	10

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				21					
LT, SA	A	3.50	1	1	15		N	1965	109	102		211	0.52	1869			1869	0.113	0.113		23	23	0.531	24	39
SA	A	3.50	1	1				2105		237		237	0.00	2105			2105	0.113			23	23	0.531	30	38
SA	B	3.50	2	1			N	1965		253		253	0.00	1965			1965	0.129	0.129		26	26	0.531	30	36
RT, SA	B	3.50	2	1	20			2105		198	68	266	0.25	2066			2066	0.129			26	26	0.531	36	36
LT	C	3.50	3	1	10		N	1965		69		69	0.00	1965			1965	0.035	0.098		7	20	0.191	6	35
RT	C	3.50	3	1	20			2105			191	191	1.00	1958			1958	0.098			20	20	0.531	24	41
Ped	D																			18		18			

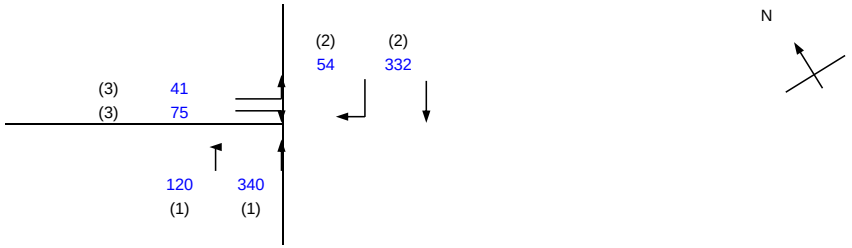
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

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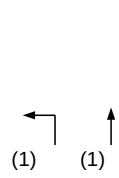
TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO.	Prepared By:	JL	Feb-21
J2: Tong Hang Road / Hing Kwai Street / Hing Fu Street	**2028 PM Ref (Signal)**	Checked By:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)	FILENAME : J2_Hing Fu Street_Hing Kwai Street_P.xls	Reviewed By:	OC	Feb-21

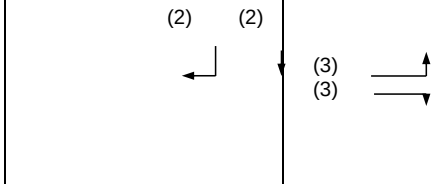
With Junction Improvement under Tuen Mun Area 54 developments (Agreement No. CE38/2011(CE))



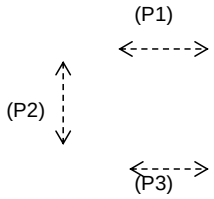
			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.250	
Loss time		L =	39	sec
Total Flow		=	963	pcu
Co	= (1.5*L+5)/(1-Y)	=	84.7	sec
Cm	= L/(1-Y)	=	52.0	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	142.7	%
Cp	= 0.9*L/(0.9-Y)	=	54.0	sec
Ymax	= 1-L/C	=	0.639	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	129.7	%



Stage A Int = 6



Stage B Int = 6 | Stage C Int = 6



Stage D Int = 6

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.0	5	6		8	10
P2	D	7.0	5	6		8	10
P3	D	7.0	5	6		8	10

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				21					
LT, SA	A	3.50	1	1	15		N	1965	120	96		216	0.56	1861			1861	0.116	0.116		32	32	0.392	24	29
SA	A	3.50	1	1				2105		244		244	0.00	2105			2105	0.116			32	32	0.392	30	29
SA	B	3.50	2	1			N	1965		188		188	0.00	1965			1965	0.096	0.096		26	26	0.392	24	33
RT, SA	B	3.50	2	1	20			2105		144	54	198	0.27	2063			2063	0.096			26	26	0.392	24	33
LT	C	3.50	3	1	10		N	1965		41		41	0.00	1965			1965	0.021	0.038		6	11	0.213	6	43
RT	C	3.50	3	1	20			2105			75	75	1.00	1958			1958	0.038			11	11	0.392	12	47
Ped	D																			18		18			

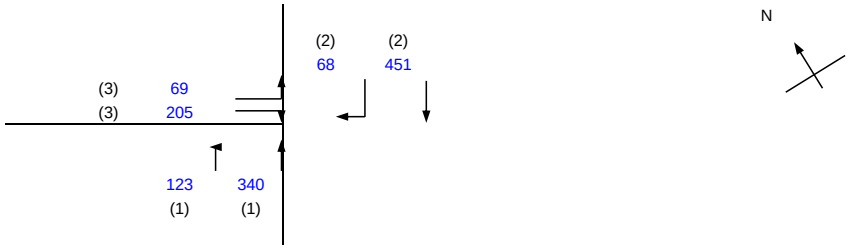
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

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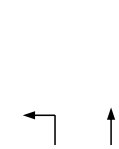
TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO.	Prepared By:	JL	Feb-21
J2: Tong Hang Road / Hing Kwai Street / Hing Fu Street	FILENAME :	Checked By:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)	**2028 AM Des (Signal)**	Reviewed By:	OC	Feb-21

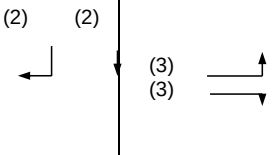
With Junction Improvement under Tuen Mun Area 54 developments (Agreement No. CE38/2011(CE))



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.350	
Loss time		L =	39	sec
Total Flow		=	1255	pcu
Co	= (1.5*L+5)/(1-Y)	=	97.7	sec
Cm	= L/(1-Y)	=	60.0	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	73.6	%
Cp	= 0.9*L/(0.9-Y)	=	63.8	sec
Ymax	= 1-L/C	=	0.639	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	64.3	%

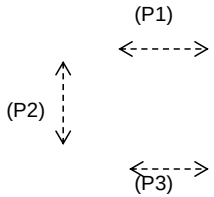


Stage A Int = 6



Stage B Int = 6

Stage C Int = 6



Stage D Int = 6

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.0	5	6		8	10
P2	D	7.0	5	6		8	10
P3	D	7.0	5	6		8	10

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				21					
LT, SA	A	3.50	1	1	15		N	1965	123	94		217	0.57	1860			1860	0.117	0.117		23	23	0.548	30	39
SA	A	3.50	1	1				2105		245		245	0.00	2105			2105	0.117			23	23	0.548	30	38
SA	B	3.50	2	1			N	1965		253		253	0.00	1965			1965	0.129	0.129		25	25	0.548	30	37
RT, SA	B	3.50	2	1	20			2105		198	68	266	0.25	2066			2066	0.129			25	25	0.548	36	37
LT	C	3.50	3	1	10		N	1965		69		69	0.00	1965			1965	0.035	0.105		7	21	0.183	6	34
RT	C	3.50	3	1	20			2105			205	205	1.00	1958			1958	0.105			21	21	0.548	24	41
Ped	D																			18		18			

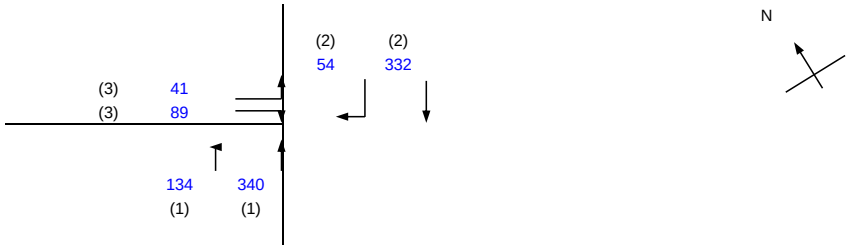
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED

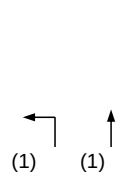
TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO.	Prepared By:	JL	Feb-21
J2: Tong Hang Road / Hing Kwai Street / Hing Fu Street	FILENAME :	Checked By:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)	**2028 PM Des (Signal)**	Reviewed By:	OC	Feb-21

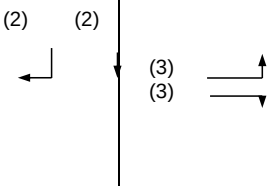
With Junction Improvement under Tuen Mun Area 54 developments (Agreement No. CE38/2011(CE))



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.261	
Loss time		L =	39	sec
Total Flow		=	991	pcu
Co	= (1.5*L+5)/(1-Y)	=	86.0	sec
Cm	= L/(1-Y)	=	52.8	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	132.5	%
Cp	= 0.9*L/(0.9-Y)	=	55.0	sec
Ymax	= 1-L/C	=	0.639	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	120.1	%

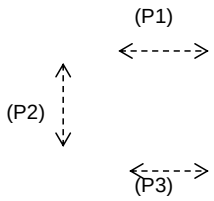


Stage A Int = 6



Stage B Int = 6

Stage C Int = 6



Stage D Int = 6

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.0	5	6		8	10
P2	D	7.0	5	6		8	10
P3	D	7.0	5	6		8	10

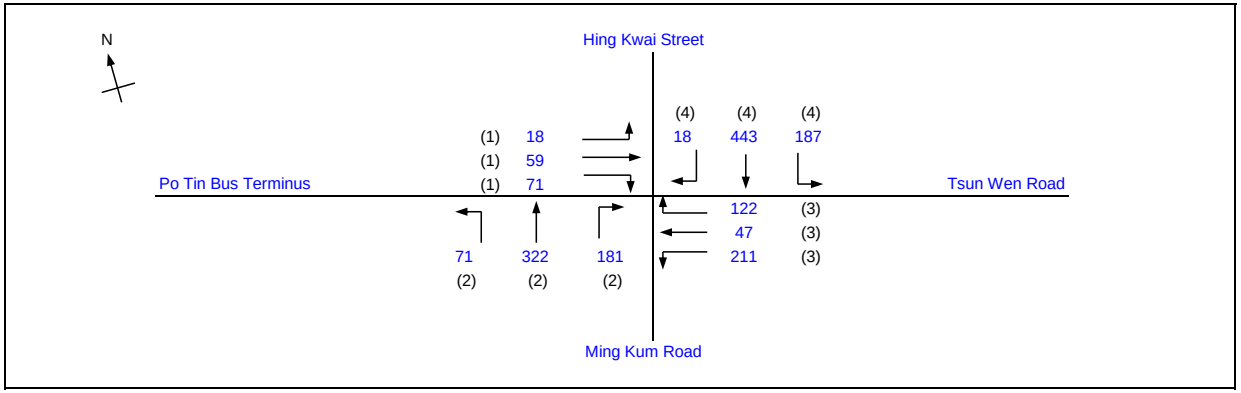
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				21					
LT, SA	A	3.50	1	1	15		N	1965	134	88		222	0.60	1853			1853	0.120	0.120		32	32	0.409	24	30
SA	A	3.50	1	1				2105		252		252	0.00	2105			2105	0.120			32	32	0.409	30	29
SA	B	3.50	2	1			N	1965		188		188	0.00	1965			1965	0.096	0.096		25	25	0.409	24	34
RT, SA	B	3.50	2	1	20			2105		144	54	198	0.27	2063			2063	0.096			25	25	0.409	24	34
LT	C	3.50	3	1	10		N	1965		41		41	0.00	1965			1965	0.021	0.045		5	12	0.187	6	41
RT	C	3.50	3	1	20			2105			89	89	1.00	1958			1958	0.045			12	12	0.409	12	45
Ped	D																			18		18			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

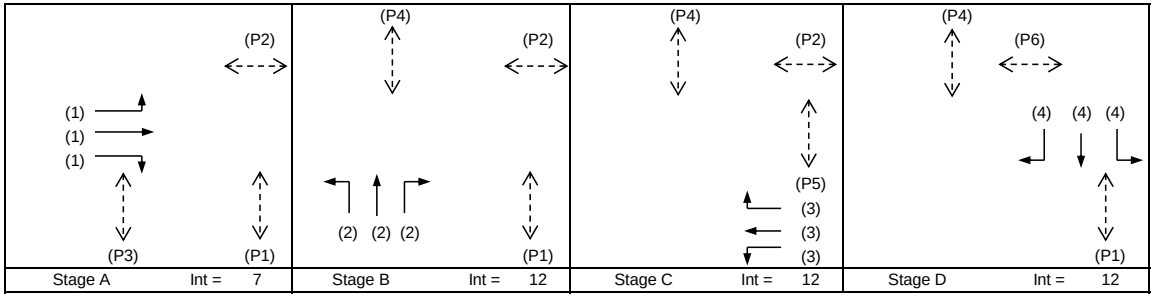
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	**2028 AM Ref**	Checked By:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)	FILENAME : J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.418	
Loss time		L =	39	sec
Total Flow		=	1749	pcu
Co	= (1.5*L+5)/(1-Y)	=	109.1	sec
Cm	= L/(1-Y)	=	67.0	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	45.4	%
Cp	= 0.9*L/(0.9-Y)	=	72.8	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	45.4	%



	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		79	8
P2	A,B,C	7.2	5	6		77	6
P3	A	10.0	5	8		18	8
P4	B,C,D	12.3	5	10		70	10
P5	C	8.5	5	7		13	8
P6	D	8.6	5	7		25	7

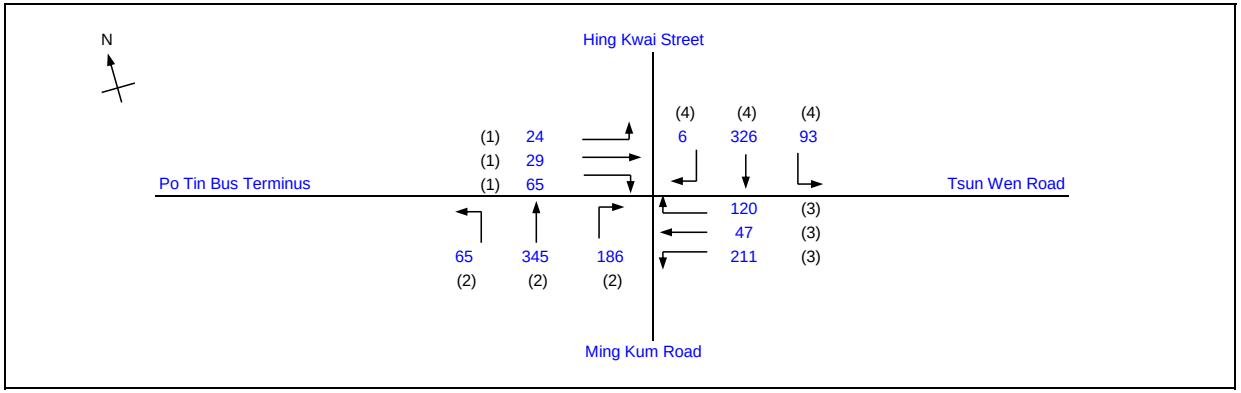
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	18			18	1.00	1870			1870	0.01			2	2	0.619	6	145
RT,SA	A	4.60	1	1	24			2215		59	71	130	0.55	2142			2142	0.06	0.06		12	12	0.619	24	59
LT,SA	B	3.40	2	1	11		N	1955	71	90		161	0.44	1844			1844	0.09			17	17	0.619	24	54
SA	B	3.50	2	1				2105		232		232	0.00	2105			2105	0.11			21	21	0.619	36	48
RT	B	3.50	2	1	26			2105			181	181	1.00	1990			1990	0.09	0.11		18	18	0.619	30	52
LT	C	3.30	3	1	17		N	1945	121			121	1.00	1787			1787	0.07			13	13	0.619	18	59
SA,LT	C	3.40	3	1	20			2095	90	47		137	0.66	1997			1997	0.07	0.07		13	13	0.619	24	58
RT	C	3.40	3	1	25			2095			122	122	1.00	1976			1976	0.06			12	12	0.619	18	60
LT,SA	D	3.70	4	1	16		N	1985	187	83		270	0.69	1864			1864	0.15			28	28	0.619	36	43
RT,SA	D	3.70	4	1	20			2125		360	18	378	0.05	2118			2118	0.18	0.18		35	35	0.619	48	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

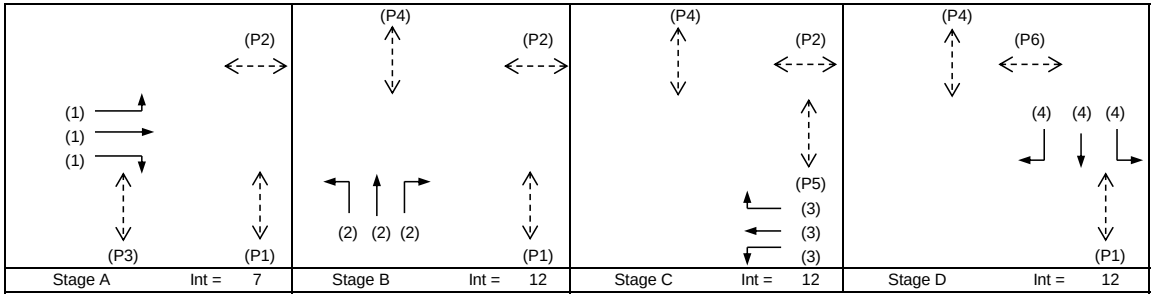
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	**2028 PM Ref**	Checked By:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)	FILENAME : J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.337	
Loss time		L =	39	sec
Total Flow		=	1517	pcu
Co	= (1.5*L+5)/(1-Y)	=	95.8	sec
Cm	= L/(1-Y)	=	58.8	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	80.1	%
Cp	= 0.9*L/(0.9-Y)	=	62.4	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	80.1	%



	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		79	8
P2	A,B,C	7.2	5	6		77	6
P3	A	10.0	5	8		18	8
P4	B,C,D	12.3	5	10		70	10
P5	C	8.5	5	7		13	8
P6	D	8.6	5	7		25	7

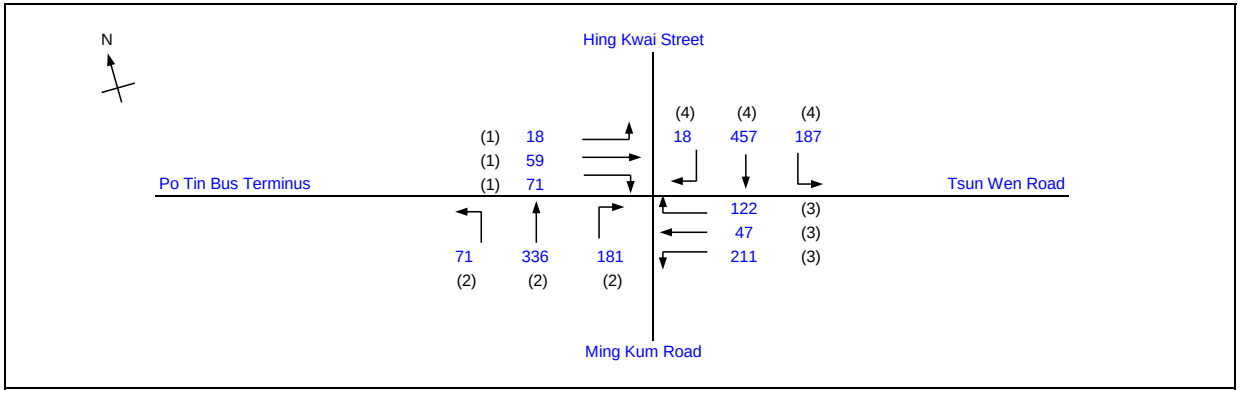
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	24			24	1.00	1870			1870	0.01			3	3	0.500	0	86
RT,SA	A	4.60	1	1	24			2215		29	65	94	0.69	2124			2124	0.04	0.04		11	11	0.500	12	55
LT,SA	B	3.40	2	1	11		N	1955	65	115		180	0.36	1863			1863	0.10			23	23	0.500	24	43
SA	B	3.50	2	1				2105		230		230	0.00	2105			2105	0.11			26	26	0.500	30	41
RT	B	3.50	2	1	26			2105			186	186	1.00	1990			1990	0.09	0.11		22	22	0.500	30	44
LT	C	3.30	3	1	17		N	1945	121			121	1.00	1787			1787	0.07			16	16	0.500	18	50
SA,LT	C	3.40	3	1	20			2095	90	47		137	0.66	1997			1997	0.07	0.07		17	17	0.500	18	49
RT	C	3.40	3	1	25			2095			120	120	1.00	1976			1976	0.06			15	15	0.500	18	51
LT,SA	D	3.70	4	1	16		N	1985	93	126		219	0.42	1909			1909	0.11			28	28	0.500	30	40
RT,SA	D	3.70	4	1	20			2125		200	6	206	0.03	2120			2120	0.10	0.11		23	23	0.500	30	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

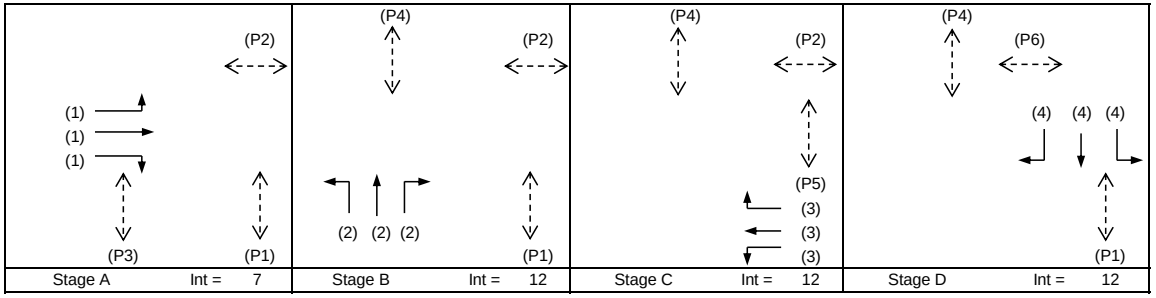
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	**2028 AM Des**	Checked By:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.420	
Loss time		L =	39	sec
Total Flow		=	1777	pcu
Co	= (1.5*L+5)/(1-Y)	=	109.4	sec
Cm	= L/(1-Y)	=	67.2	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	44.8	%
Cp	= 0.9*L/(0.9-Y)	=	73.1	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	44.8	%



	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		79	8
P2	A,B,C	7.2	5	6		77	6
P3	A	10.0	5	8		18	8
P4	B,C,D	12.3	5	10		70	10
P5	C	8.5	5	7		13	8
P6	D	8.6	5	7		25	7

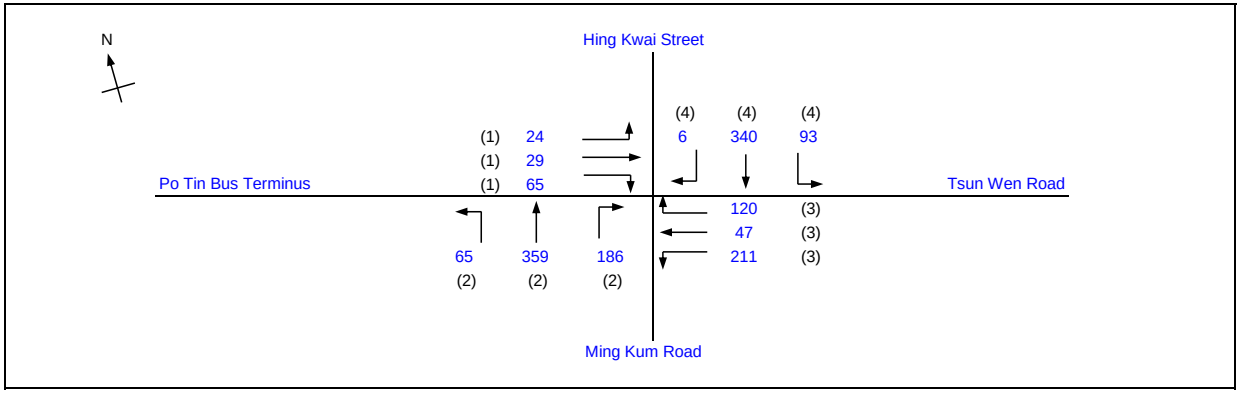
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	18			18	1.00	1870			1870	0.01			2	2	0.622	6	146
RT,SA	A	4.60	1	1	24			2215		59	71	130	0.55	2142			2142	0.06	0.06		12	12	0.622	24	60
LT,SA	B	3.40	2	1	11		N	1955	71	120		191	0.37	1861			1861	0.10			20	20	0.622	30	51
SA	B	3.50	2	1				2105		216		216	0.00	2105			2105	0.10			20	20	0.622	36	50
RT	B	3.50	2	1	26			2105			181	181	1.00	1990			1990	0.09	0.10		18	18	0.622	30	52
LT	C	3.30	3	1	17		N	1945	121			121	1.00	1787			1787	0.07			13	13	0.622	18	60
SA,LT	C	3.40	3	1	20			2095	90	47		137	0.66	1997			1997	0.07	0.07		13	13	0.622	24	58
RT	C	3.40	3	1	25			2095			122	122	1.00	1976			1976	0.06			12	12	0.622	18	60
LT,SA	D	3.70	4	1	16		N	1985	187	77		264	0.71	1861			1861	0.14			27	27	0.622	36	44
RT,SA	D	3.70	4	1	20			2125		380	18	398	0.04	2118			2118	0.19	0.19		36	36	0.622	54	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

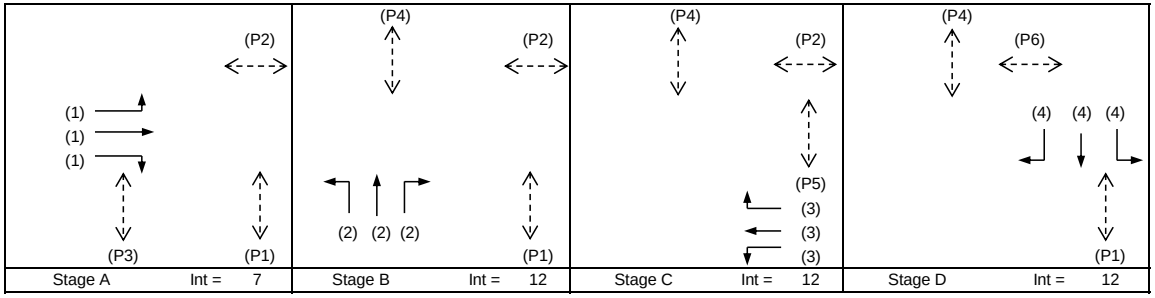
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	**2028 PM Des**	Checked By:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.331	
Loss time		L =	39	sec
Total Flow		=	1545	pcu
Co	= (1.5*L+5)/(1-Y)	=	94.9	sec
Cm	= L/(1-Y)	=	58.3	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	83.5	%
Cp	= 0.9*L/(0.9-Y)	=	61.7	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	83.5	%

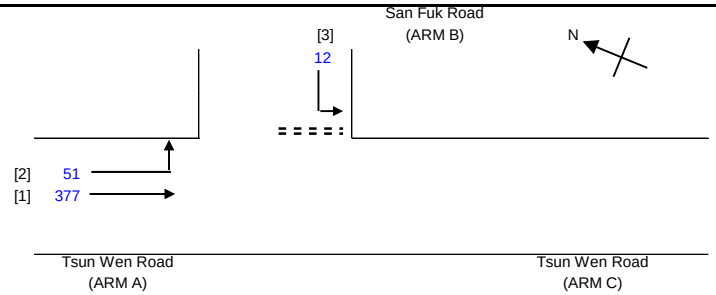


	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		79	8
P2	A,B,C	7.2	5	6		77	6
P3	A	10.0	5	8		18	8
P4	B,C,D	12.3	5	10		70	10
P5	C	8.5	5	7		13	8
P6	D	8.6	5	7		25	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	24			24	1.00	1870			1870	0.01			3	3	0.491	0	84
RT,SA	A	4.60	1	1	24			2215		29	65	94	0.69	2124			2124	0.04	0.04		11	11	0.491	12	55
LT,SA	B	3.40	2	1	11		N	1955	65	135		200	0.32	1872			1872	0.11			26	26	0.491	30	41
SA	B	3.50	2	1				2105		224		224	0.00	2105			2105	0.11			26	26	0.491	30	40
RT	B	3.50	2	1	26			2105			186	186	1.00	1990			1990	0.09	0.11		23	23	0.491	30	43
LT	C	3.30	3	1	17		N	1945	121			121	1.00	1787			1787	0.07			17	17	0.491	18	49
SA,LT	C	3.40	3	1	20			2095	90	47		137	0.66	1997			1997	0.07	0.07		17	17	0.491	18	48
RT	C	3.40	3	1	25			2095			120	120	1.00	1976			1976	0.06			15	15	0.491	18	50
LT,SA	D	3.70	4	1	16		N	1985	93	110		203	0.46	1903			1903	0.11			26	26	0.491	30	41
RT,SA	D	3.70	4	1	20			2125		230	6	236	0.03	2121			2121	0.11	0.11		27	27	0.491	36	40

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J4 : Tsun Wen Road / San Fuk Road	**2028 AM Ref**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.50	(metres)
W cr	=	0	(metres)
q a-b	=	51	(pcu/hr)
q a-c	=	377	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.95	(metres)
Vl b-a	=	49	(metres)
Vr b-a	=	38	(metres)
Vr b-c	=	38	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	12	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5715505
E	=	1.0397299
F	=	0.5859548
Y	=	0.74125

THE CAPACITY OF MOVEMENT :

Q b-a	=	297			
Q b-c	=	663	Q b-c (O) =	663	
Q c-b	=	369			

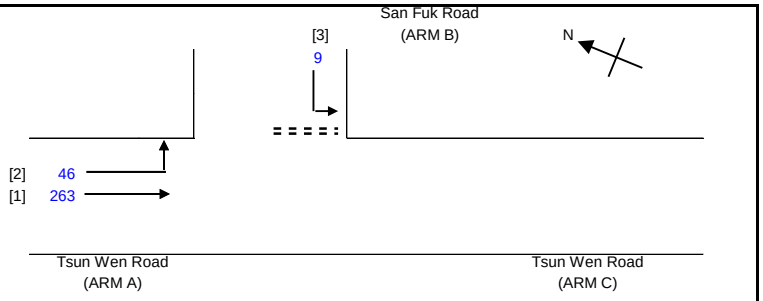
TOTAL FLOW = 439.1273282 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0178
DFC c-b	=	0.0000

CRITICAL DFC = 0.02

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J4 : Tsun Wen Road / San Fuk Road	**2028 PM Ref**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.50	(metres)
W cr	=	0	(metres)
q a-b	=	46	(pcu/hr)
q a-c	=	263	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.95	(metres)
Vl b-a	=	49	(metres)
Vr b-a	=	38	(metres)
Vr b-c	=	38	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	9	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5715505
E	=	1.0397299
F	=	0.5859548
Y	=	0.74125

THE CAPACITY OF MOVEMENT :

Q b-a	=	315			
Q b-c	=	696	Q b-c (O) =	696	
Q c-b	=	388			

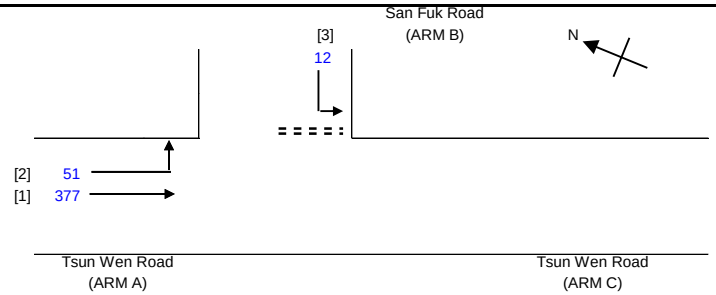
TOTAL FLOW = 317.9912672 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0136
DFC c-b	=	0.0000

CRITICAL DFC = 0.01

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J4 : Tsun Wen Road / San Fuk Road	**2028 AM Des**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.50	(metres)
W cr	=	0	(metres)
q a-b	=	51	(pcu/hr)
q a-c	=	377	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.95	(metres)
Vl b-a	=	49	(metres)
Vr b-a	=	38	(metres)
Vr b-c	=	38	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	12	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5715505
E	=	1.0397299
F	=	0.5859548
Y	=	0.74125

THE CAPACITY OF MOVEMENT :

Q b-a	=	297			
Q b-c	=	663	Q b-c (O) =	663	
Q c-b	=	369			

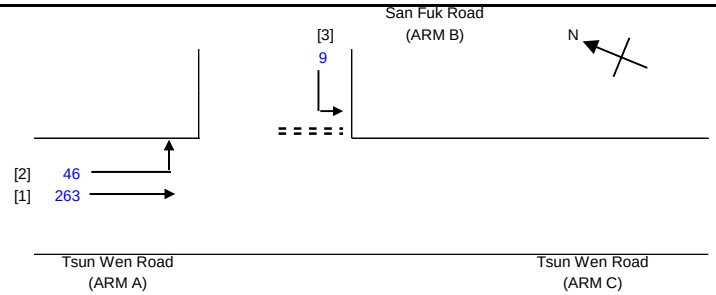
TOTAL FLOW = 439.1273282 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0178
DFC c-b	=	0.0000

CRITICAL DFC = 0.02

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J4 : Tsun Wen Road / San Fuk Road	**2028 PM Des**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.50	(metres)
W cr	=	0	(metres)
q a-b	=	46	(pcu/hr)
q a-c	=	263	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.95	(metres)
Vl b-a	=	49	(metres)
Vr b-a	=	38	(metres)
Vr b-c	=	38	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	9	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5715505
E	=	1.0397299
F	=	0.5859548
Y	=	0.74125

THE CAPACITY OF MOVEMENT :

Q b-a	=	315			
Q b-c	=	696	Q b-c (O) =	696	
Q c-b	=	388			

TOTAL FLOW = 317.9912672 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

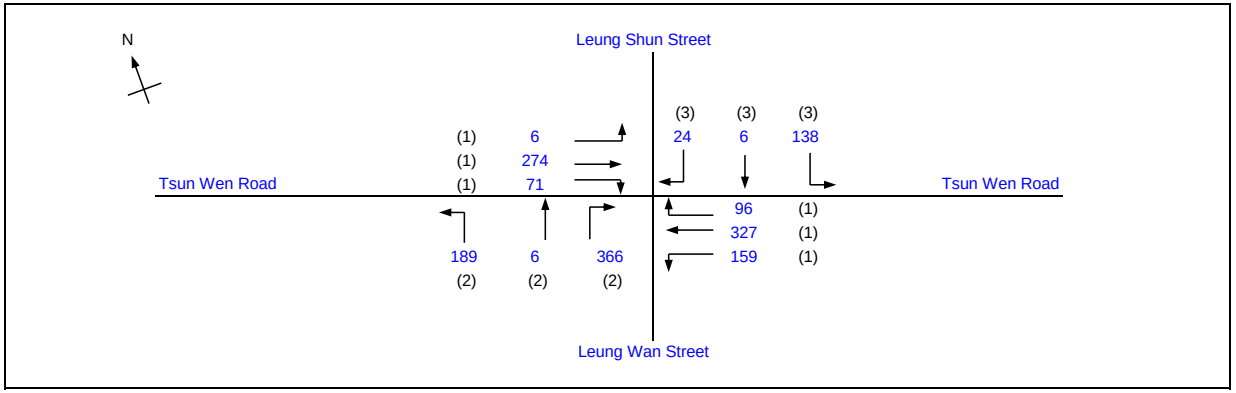
DFC b-a	=	0.0000
DFC b-c	=	0.0136
DFC c-b	=	0.0000

CRITICAL DFC = 0.01

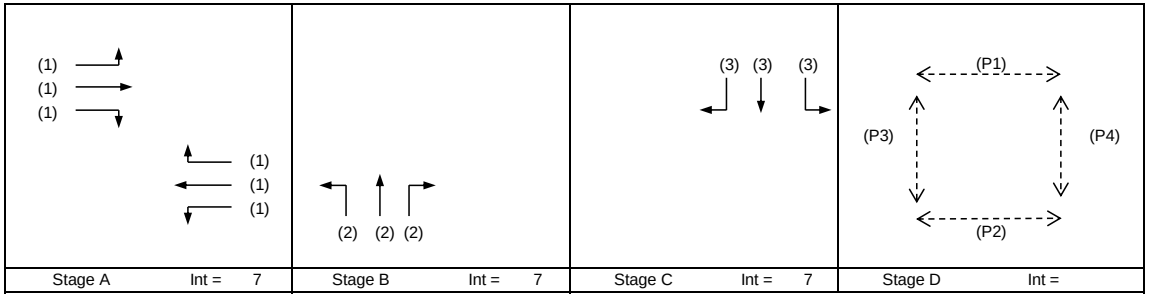
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	**2028 AM Ref**	Checked By:	MM	Feb-21
2028 AM Reference Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.490	
Loss time		L =	43	sec
Total Flow		=	1661	pcu
Co	= (1.5*L+5)/(1-Y)	=	136.2	sec
Cm	= L/(1-Y)	=	84.3	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	17.9	%
Cp	= 0.9*L/(0.9-Y)	=	94.3	sec
Ymax	= 1-L/C	=	0.642	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	17.9	%



Stage A	Int = 7	Stage B	Int = 7	Stage C	Int = 7	Stage D	Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

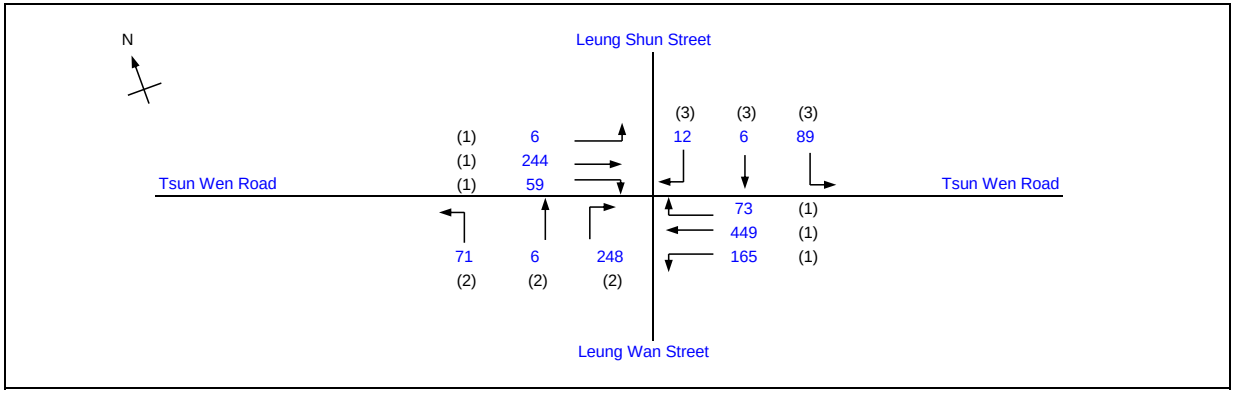
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	129		135	0.04	1932			1932	0.070			11	20	0.423	18	44
SA	A	3.30	1	1				2085		145		145	0.00	2085			2085	0.070			11	20	0.423	24	44
RT	A	3.30	1	1	30	O		2085			71	71	1.00	1767	12	60	1827	0.039			6	20	0.235	6	41
LT,SA	A	3.50	1	1	10		N	1965	159	64		223	0.71	1775			1775	0.126			20	20	0.763	36	61
SA	A	3.40	1	1				2095		263		263	0.00	2095			2095	0.126	0.126		20	20	0.763	42	58
RT	A	3.40	1	1	30	O		2095			96	96	1.00	1776	12	60	1836	0.052			8	20	0.318	12	42
LT,SA,RT	B	5.50	2	1	25		N	2165	189	6	366	560	0.99	2044			2044	0.274	0.274		43	43	0.763	66	38
LT,SA,RT	C	3.60	3	1	25		N	1975	138	6	24	168	0.96	1867			1867	0.090	0.090		14	14	0.763	30	70
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

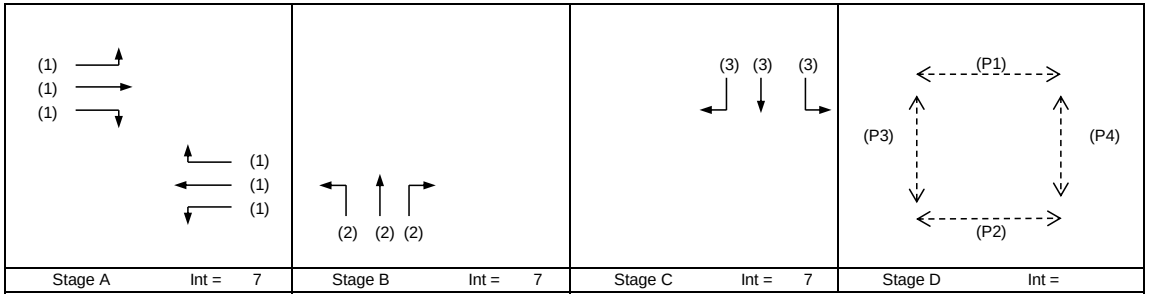
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	**2028 PM Ref**	Checked By:	MM	Feb-21
2028 PM Reference Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.373	
Loss time		L =	43	sec
Total Flow		=	1427	pcu
Co	= (1.5*L+5)/(1-Y)	=	110.9	sec
Cm	= L/(1-Y)	=	68.6	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	54.7	%
Cp	= 0.9*L/(0.9-Y)	=	73.5	sec
Ymax	= 1-L/C	=	0.642	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	54.7	%



Stage A	Int = 7	Stage B	Int = 7	Stage C	Int = 7	Stage D	Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

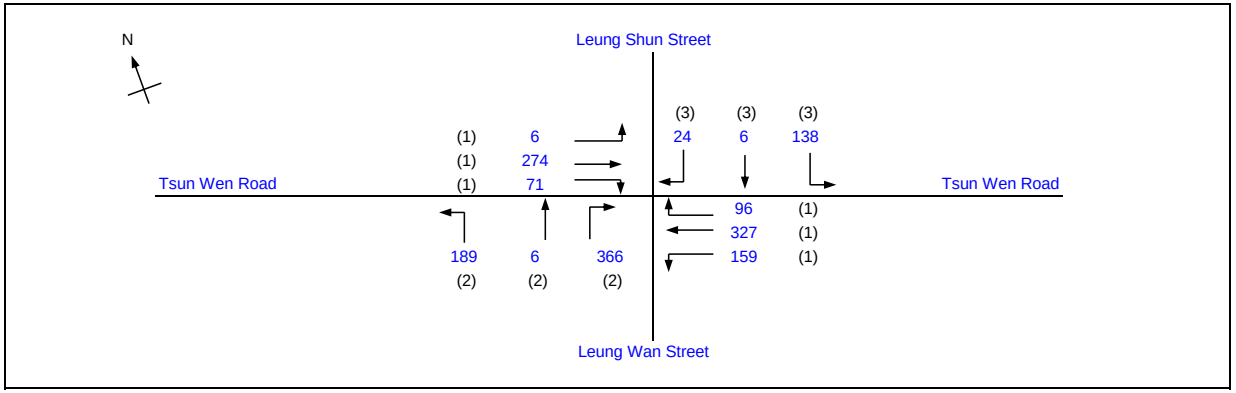
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	114		120	0.05	1931			1931	0.062			13	32	0.230	12	32
SA	A	3.30	1	1				2085		130		130	0.00	2085			2085	0.062			13	32	0.230	18	32
RT	A	3.30	1	1	30	O		2085			59	59	1.00	1767	12	60	1827	0.032			7	32	0.119	6	30
LT,SA	A	3.50	1	1	10		N	1965	165	119		284	0.58	1808			1808	0.157			32	32	0.582	36	39
SA	A	3.40	1	1				2095		330		330	0.00	2095			2095	0.157	0.157		32	32	0.582	48	38
RT	A	3.40	1	1	30	O		2095			73	73	1.00	1776	12	60	1836	0.040			8	32	0.148	6	31
LT,SA,RT	B	5.50	2	1	25		N	2165	71	6	248	324	0.98	2045			2045	0.159	0.159		33	33	0.582	42	38
LT,SA,RT	C	3.60	3	1	25		N	1975	89	6	12	107	0.94	1869			1869	0.057	0.057		12	12	0.582	18	59
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

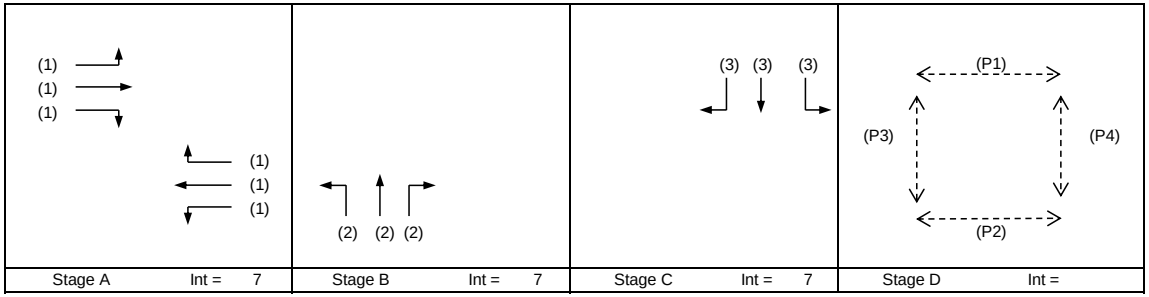
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	**2028 AM Des**	Checked By:	MM	Feb-21
2028 AM Design Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.490	
Loss time		L =	43	sec
Total Flow		=	1661	pcu
Co	= (1.5*L+5)/(1-Y)	=	136.2	sec
Cm	= L/(1-Y)	=	84.3	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	17.9	%
Cp	= 0.9*L/(0.9-Y)	=	94.3	sec
Ymax	= 1-L/C	=	0.642	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	17.9	%



Stage A Int = 7 | Stage B Int = 7 | Stage C Int = 7 | Stage D Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

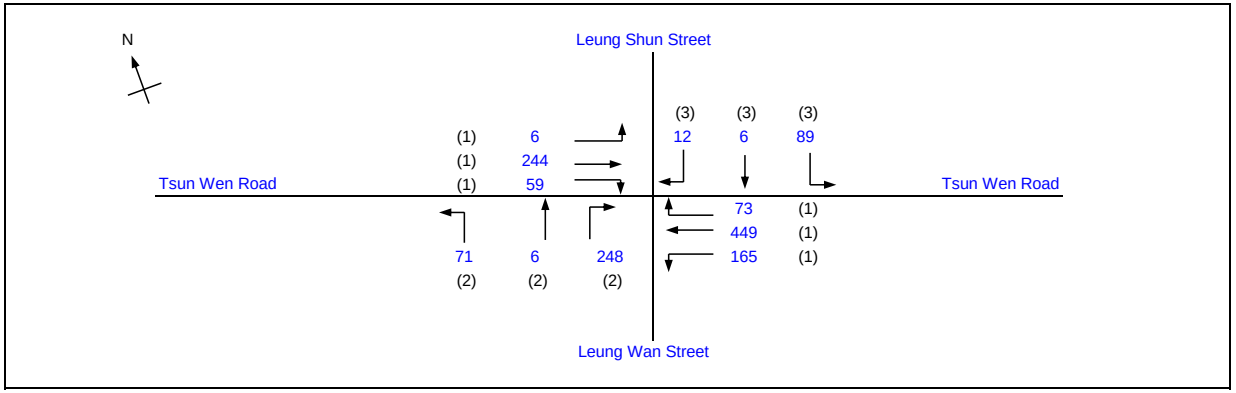
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	129		135	0.04	1932			1932	0.070			11	20	0.423	18	44
SA	A	3.30	1	1				2085		145		145	0.00	2085			2085	0.070			11	20	0.423	24	44
RT	A	3.30	1	1	30	O		2085			71	71	1.00	1767	12	60	1827	0.039			6	20	0.235	6	41
LT,SA	A	3.50	1	1	10		N	1965	159	64		223	0.71	1775			1775	0.126			20	20	0.763	36	61
SA	A	3.40	1	1				2095		263		263	0.00	2095			2095	0.126	0.126		20	20	0.763	42	58
RT	A	3.40	1	1	30	O		2095			96	96	1.00	1776	12	60	1836	0.052			8	20	0.318	12	42
LT,SA,RT	B	5.50	2	1	25		N	2165	189	6	366	560	0.99	2044			2044	0.274	0.274		43	43	0.763	66	38
LT,SA,RT	C	3.60	3	1	25		N	1975	138	6	24	168	0.96	1867			1867	0.090	0.090		14	14	0.763	30	70
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

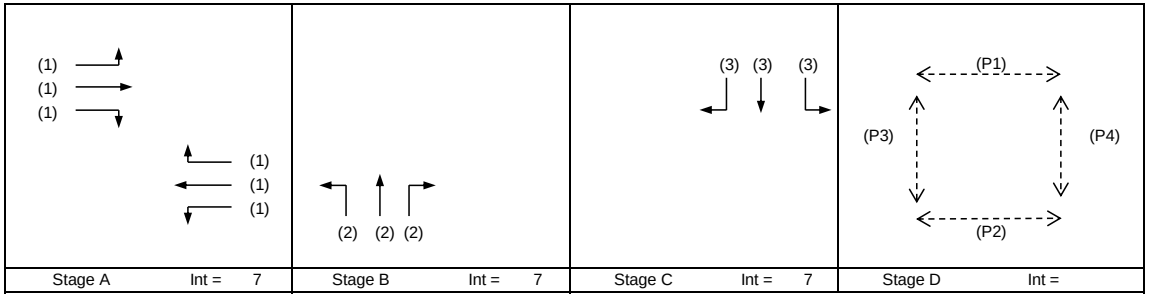
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	**2028 PM Des**	Checked By:	MM	Feb-21
2028 PM Design Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.373	
Loss time		L =	43	sec
Total Flow		=	1427	pcu
Co	= (1.5*L+5)/(1-Y)	=	110.9	sec
Cm	= L/(1-Y)	=	68.6	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	54.7	%
Cp	= 0.9*L/(0.9-Y)	=	73.5	sec
Ymax	= 1-L/C	=	0.642	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	54.7	%



Stage A Int = 7 | Stage B Int = 7 | Stage C Int = 7 | Stage D Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

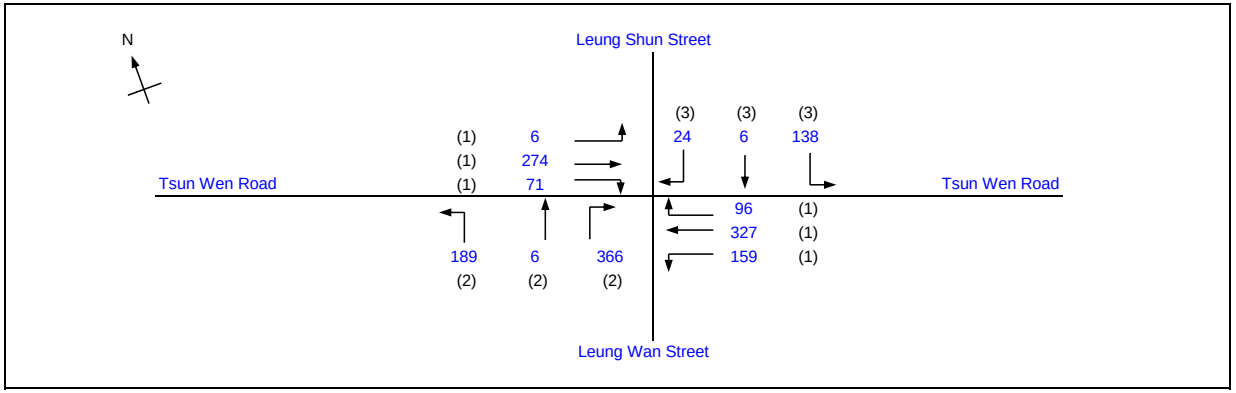
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	114		120	0.05	1931			1931	0.062			13	32	0.230	12	32
SA	A	3.30	1	1				2085		130		130	0.00	2085			2085	0.062			13	32	0.230	18	32
RT	A	3.30	1	1	30	O		2085			59	59	1.00	1767	12	60	1827	0.032			7	32	0.119	6	30
LT,SA	A	3.50	1	1	10		N	1965	165	119		284	0.58	1808			1808	0.157			32	32	0.582	36	39
SA	A	3.40	1	1				2095		330		330	0.00	2095			2095	0.157	0.157		32	32	0.582	48	38
RT	A	3.40	1	1	30	O		2095			73	73	1.00	1776	12	60	1836	0.040			8	32	0.148	6	31
LT,SA,RT	B	5.50	2	1	25		N	2165	71	6	248	324	0.98	2045			2045	0.159	0.159		33	33	0.582	42	38
LT,SA,RT	C	3.60	3	1	25		N	1975	89	6	12	107	0.94	1869			1869	0.057	0.057		12	12	0.582	18	59
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

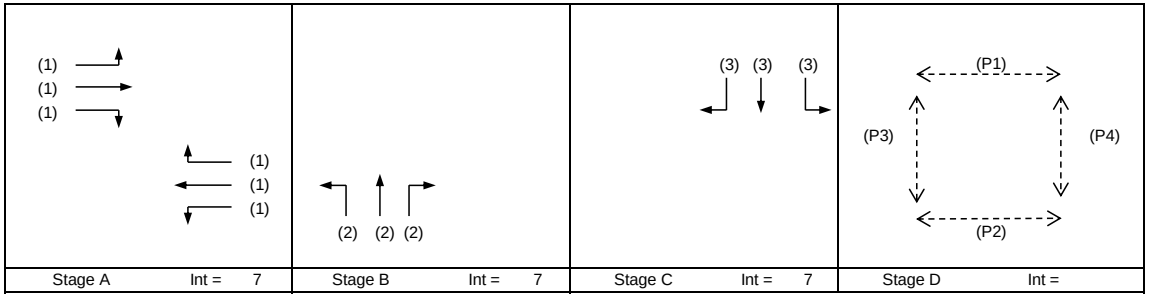
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	**2028 AM Ref (Cycle 125s)**	Checked By:	MM	Feb-21
2028 AM Reference Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	125	sec
Sum(y)		Y =	0.490	
Loss time		L =	43	sec
Total Flow		=	1661	pcu
Co	= (1.5*L+5)/(1-Y)	=	136.2	sec
Cm	= L/(1-Y)	=	84.3	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	17.9	%
Cp	= 0.9*L/(0.9-Y)	=	94.3	sec
Ymax	= 1-L/C	=	0.656	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	20.6	%



Stage A	Int = 7	Stage B	Int = 7	Stage C	Int = 7	Stage D	Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

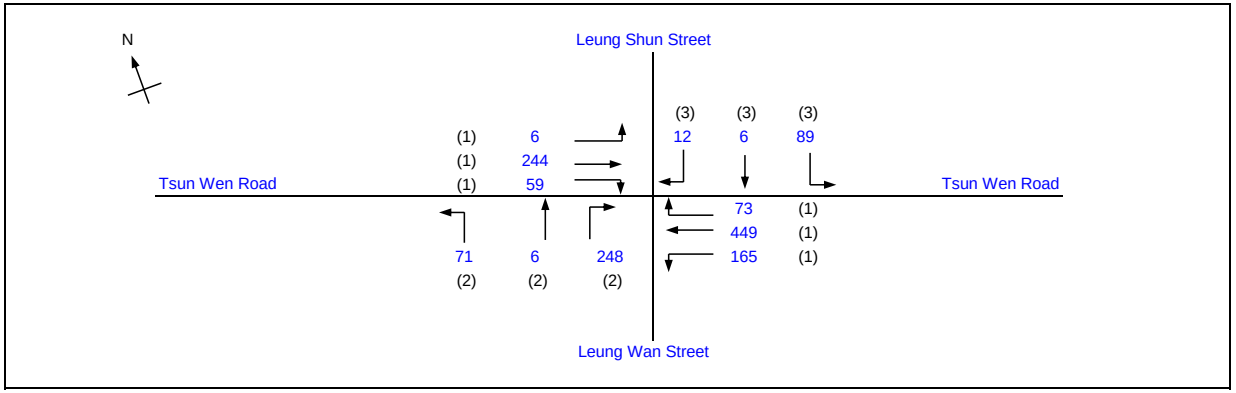
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	129		135	0.04	1932			1932	0.070			12	21	0.414	18	45
SA	A	3.30	1	1				2085		145		145	0.00	2085			2085	0.070			12	21	0.414	24	45
RT	A	3.30	1	1	30	O		2085			71	71	1.00	1767	12	58	1824	0.039			6	21	0.231	12	42
LT,SA	A	3.50	1	1	10		N	1965	159	64		223	0.71	1775			1775	0.126			21	21	0.747	36	60
SA	A	3.40	1	1				2095		263		263	0.00	2095			2095	0.126	0.126		21	21	0.747	48	58
RT	A	3.40	1	1	30	O		2095			96	96	1.00	1776	12	58	1834	0.052			9	21	0.311	12	43
LT,SA,RT	B	5.50	2	1	25		N	2165	189	6	366	560	0.99	2044			2044	0.274	0.274		46	46	0.747	72	37
LT,SA,RT	C	3.60	3	1	25		N	1975	138	6	24	168	0.96	1867			1867	0.090	0.090		15	15	0.747	30	69
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

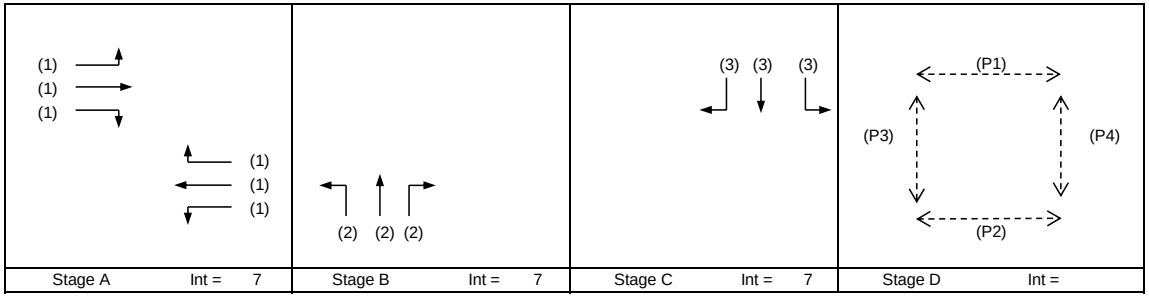
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	**2028 PM Ref (Cycle 125s)**	Checked By:	MM	Feb-21
2028 PM Reference Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	125	sec
Sum(y)		Y =	0.373	
Loss time		L =	43	sec
Total Flow		=	1427	pcu
Co	= (1.5*L+5)/(1-Y)	=	110.9	sec
Cm	= L/(1-Y)	=	68.6	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	54.7	%
Cp	= 0.9*L/(0.9-Y)	=	73.5	sec
Ymax	= 1-L/C	=	0.656	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	58.2	%



Stage A	Int = 7	Stage B	Int = 7	Stage C	Int = 7	Stage D	Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

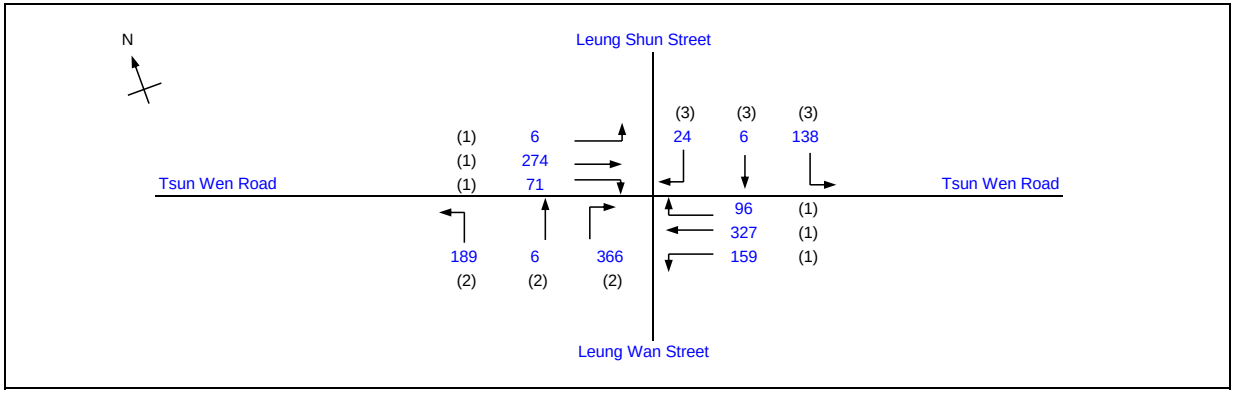
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	114		120	0.05	1931			1931	0.062			14	35	0.225	18	32
SA	A	3.30	1	1				2085		130		130	0.00	2085			2085	0.062			14	35	0.225	18	32
RT	A	3.30	1	1	30	O		2085			59	59	1.00	1767	12	58	1824	0.032			7	35	0.117	6	31
LT,SA	A	3.50	1	1	10		N	1965	165	119		284	0.58	1808			1808	0.157			35	35	0.569	42	39
SA	A	3.40	1	1				2095		330		330	0.00	2095			2095	0.157	0.157		35	35	0.569	48	39
RT	A	3.40	1	1	30	O		2095			73	73	1.00	1776	12	58	1834	0.040			9	35	0.145	6	31
LT,SA,RT	B	5.50	2	1	25		N	2165	71	6	248	324	0.98	2045			2045	0.159	0.159		35	35	0.569	48	39
LT,SA,RT	C	3.60	3	1	25		N	1975	89	6	12	107	0.94	1869			1869	0.057	0.057		13	13	0.569	18	60
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

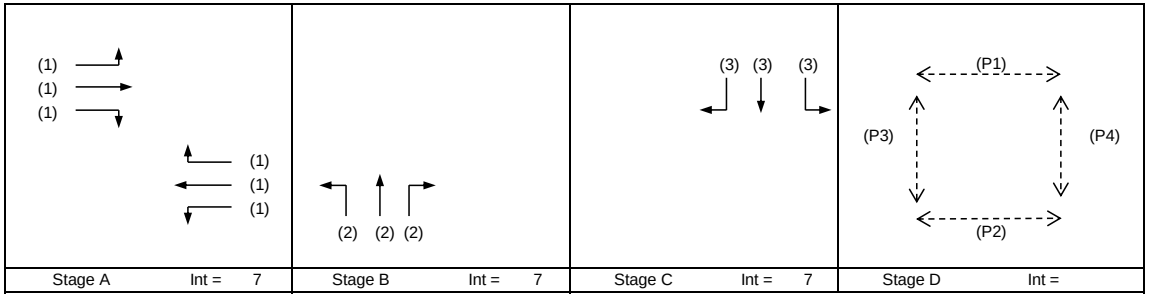
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	**2028 AM Des (Cycle 125s)**	Checked By:	MM	Feb-21
2028 AM Design Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	125	sec
Sum(y)		Y =	0.490	
Loss time		L =	43	sec
Total Flow		=	1661	pcu
Co	= (1.5*L+5)/(1-Y)	=	136.2	sec
Cm	= L/(1-Y)	=	84.3	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	17.9	%
Cp	= 0.9*L/(0.9-Y)	=	94.3	sec
Ymax	= 1-L/C	=	0.656	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	20.6	%



Stage A	Int = 7	Stage B	Int = 7	Stage C	Int = 7	Stage D	Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	129		135	0.04	1932			1932	0.070			12	21	0.414	18	45
SA	A	3.30	1	1				2085		145		145	0.00	2085			2085	0.070			12	21	0.414	24	45
RT	A	3.30	1	1	30	O		2085			71	71	1.00	1767	12	58	1824	0.039			6	21	0.231	12	42
LT,SA	A	3.50	1	1	10		N	1965	159	64		223	0.71	1775			1775	0.126			21	21	0.747	36	60
SA	A	3.40	1	1				2095		263		263	0.00	2095			2095	0.126	0.126		21	21	0.747	48	58
RT	A	3.40	1	1	30	O		2095			96	96	1.00	1776	12	58	1834	0.052			9	21	0.311	12	43
LT,SA,RT	B	5.50	2	1	25		N	2165	189	6	366	560	0.99	2044			2044	0.274	0.274		46	46	0.747	72	37
LT,SA,RT	C	3.60	3	1	25		N	1975	138	6	24	168	0.96	1867			1867	0.090	0.090		15	15	0.747	30	69
PED	D																			25		25			

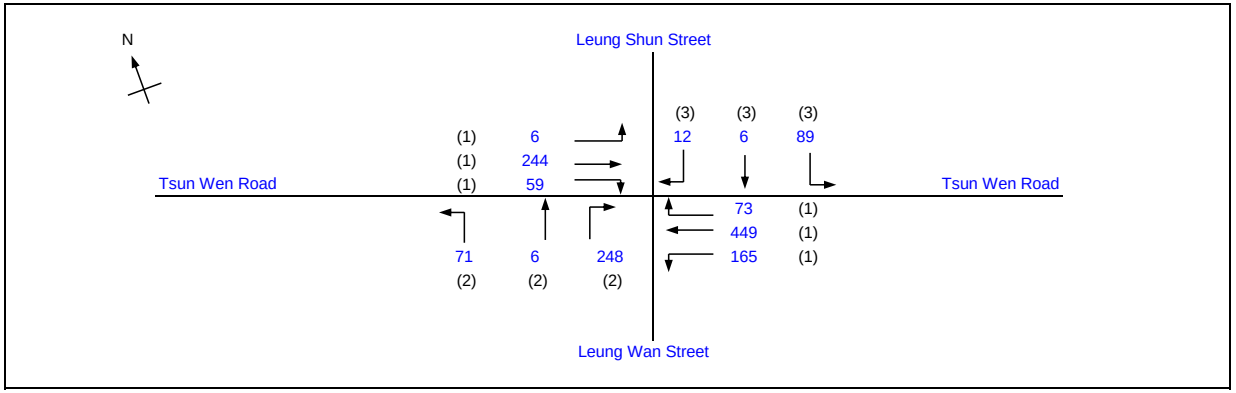
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED

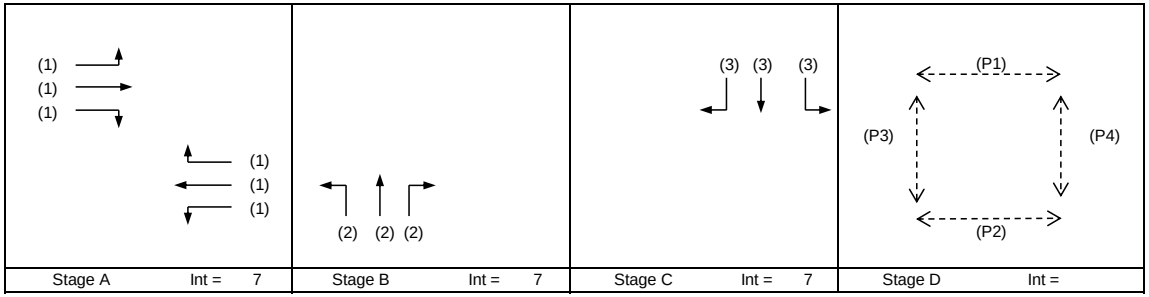
TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	FILENAME :	Checked By:	MM	Feb-21
2028 PM Design Hour Traffic Flows (Weekday)	J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21

2028 PM Des (Cycle 125s)



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	125	sec
Sum(y)		Y =	0.373	
Loss time		L =	43	sec
Total Flow		=	1427	pcu
Co	= (1.5*L+5)/(1-Y)	=	110.9	sec
Cm	= L/(1-Y)	=	68.6	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	54.7	%
Cp	= 0.9*L/(0.9-Y)	=	73.5	sec
Ymax	= 1-L/C	=	0.656	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	58.2	%



Stage A Int = 7 | Stage B Int = 7 | Stage C Int = 7 | Stage D Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

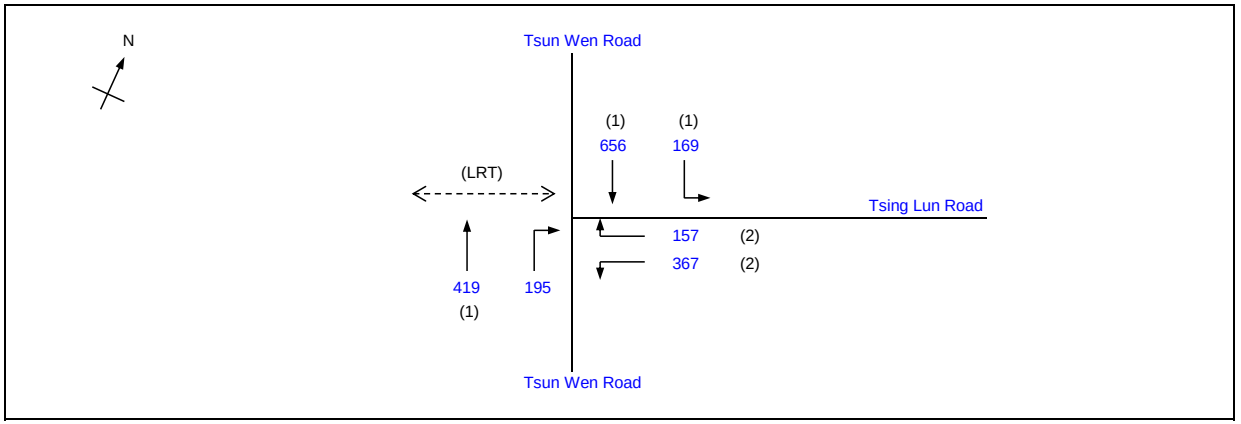
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	114		120	0.05	1931			1931	0.062			14	35	0.225	18	32
SA	A	3.30	1	1				2085		130		130	0.00	2085			2085	0.062			14	35	0.225	18	32
RT	A	3.30	1	1	30	O		2085			59	59	1.00	1767	12	58	1824	0.032			7	35	0.117	6	31
LT,SA	A	3.50	1	1	10		N	1965	165	119		284	0.58	1808			1808	0.157			35	35	0.569	42	39
SA	A	3.40	1	1				2095		330		330	0.00	2095			2095	0.157	0.157		35	35	0.569	48	39
RT	A	3.40	1	1	30	O		2095			73	73	1.00	1776	12	58	1834	0.040			9	35	0.145	6	31
LT,SA,RT	B	5.50	2	1	25		N	2165	71	6	248	324	0.98	2045			2045	0.159	0.159		35	35	0.569	48	39
LT,SA,RT	C	3.60	3	1	25		N	1975	89	6	12	107	0.94	1869			1869	0.057	0.057		13	13	0.569	18	60
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

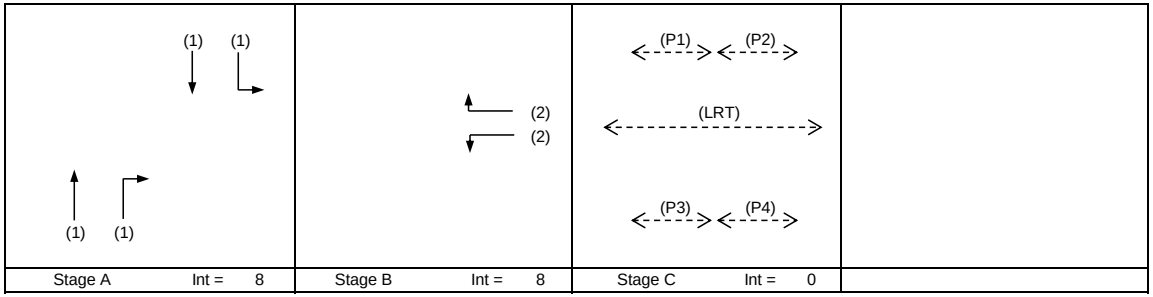
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J6: Tsing Lun Road / Tsun Wen Road	**2028 AM Ref**	Checked By:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)	FILENAME : J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	72	sec
Sum(y)		Y =	0.360	
Loss time		L =	36	sec
Total Flow		=	1963	pcu
Co	= (1.5*L+5)/(1-Y)	=	92.2	sec
Cm	= L/(1-Y)	=	56.2	sec
Yult		=	0.630	
R.C.ult	= (Yult-Y)/Y*100%	=	75.1	%
Cp	= 0.9*L/(0.9-Y)	=	60.0	sec
Ymax	= 1-L/C	=	0.500	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	25.1	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

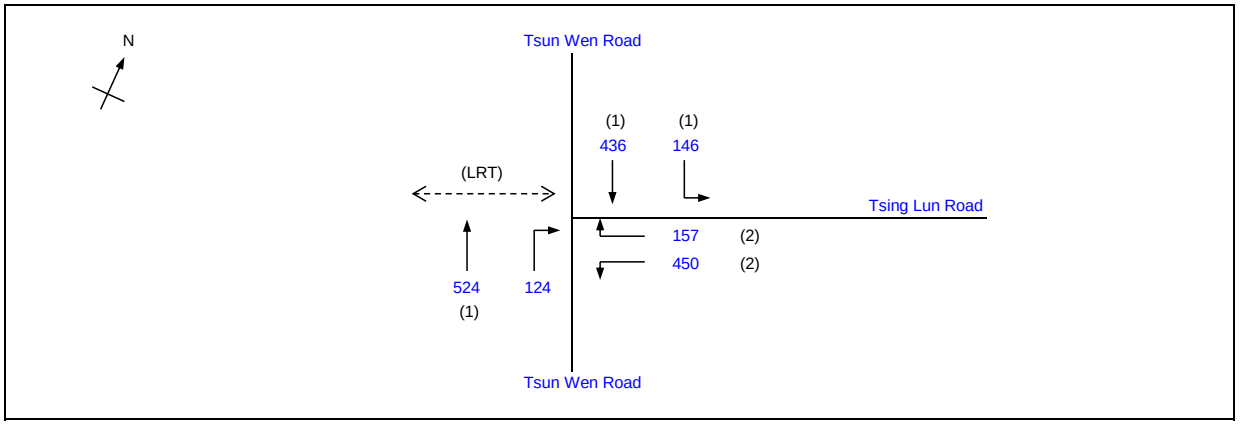
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		419		419	0.00	4030			4030	0.104			10	16	0.476	18	24
RT	A	3.50	1	1	10	O		2105			195	195	1.00	1630	12	100	1730	0.112	0.157		11	16	0.515	18	27
LT	A	3.30	1	1	10		N	1945	169			169	1.00	1691			1691	0.100			10	16	0.458	12	26
SA	A	3.30	1	2	10			4170		656		656	0.00	4170			4170	0.157			16	16	0.720	30	28
LT	B	3.30	2	1	10			2085	367			367	1.00	1813			1813	0.202	0.202		20	20	0.720	30	29
RT	B	3.50	2	1	10			2105			157	157	1.00	1830			1830	0.086			9	20	0.306	12	20
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

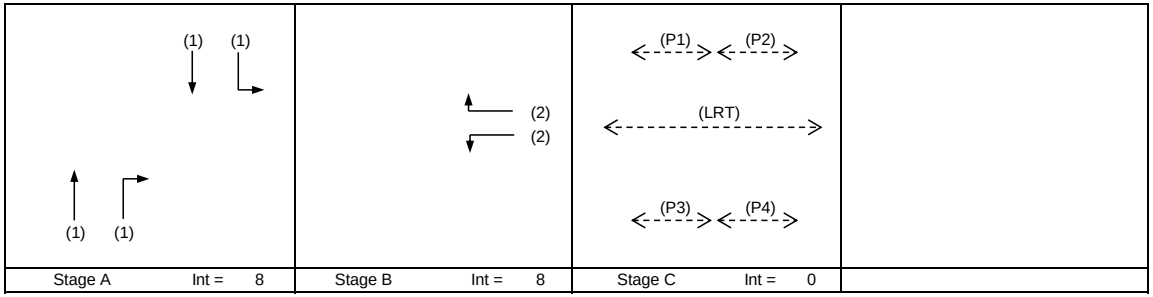
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J6: Tsing Lun Road / Tsun Wen Road	**2028 PM Ref**	Checked By:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)	FILENAME : J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	72	sec
Sum(y)		Y =	0.378	
Loss time		L =	36	sec
Total Flow		=	1837	pcu
Co	= (1.5*L+5)/(1-Y)	=	94.9	sec
Cm	= L/(1-Y)	=	57.9	sec
Yult		=	0.630	
R.C.ult	= (Yult-Y)/Y*100%	=	66.7	%
Cp	= 0.9*L/(0.9-Y)	=	62.1	sec
Ymax	= 1-L/C	=	0.500	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	19.1	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

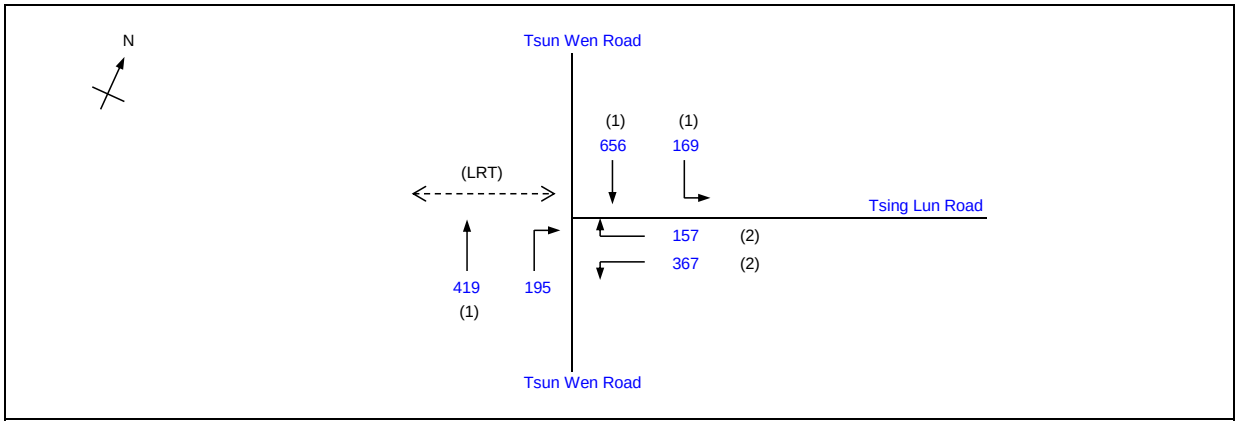
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		524		524	0.00	4030			4030	0.130	0.130		12	12	0.756	27	33
RT	A	3.50	1	1	10	O		2105			124	124	1.00	1630	12	100	1730	0.072			7	12	0.416	12	28
LT	A	3.30	1	1	10		N	1945	146			146	1.00	1691			1691	0.086			8	12	0.501	12	30
SA	A	3.30	1	2	10			4170		436		436	0.00	4170			4170	0.105			10	12	0.608	21	28
LT	B	3.30	2	1	10			2085	450			450	1.00	1813			1813	0.248	0.248		24	24	0.756	36	28
RT	B	3.50	2	1	10			2105			157	157	1.00	1830			1830	0.086			8	24	0.262	12	17
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

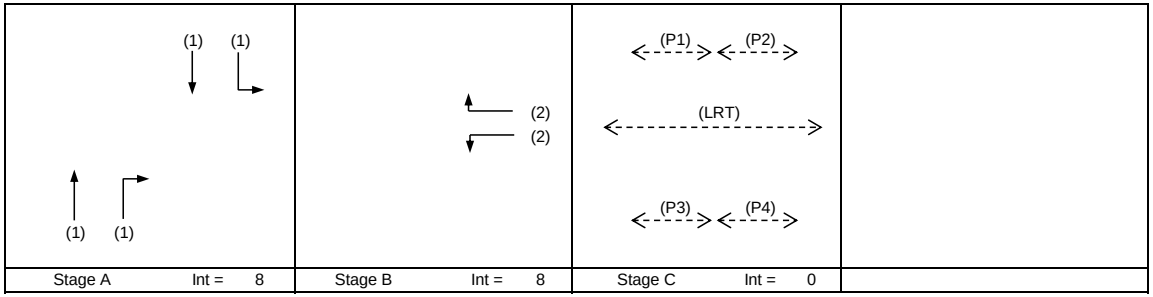
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J6: Tsing Lun Road / Tsun Wen Road	**2028 AM Des**	Checked By:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	72	sec
Sum(y)		Y =	0.360	
Loss time		L =	36	sec
Total Flow		=	1963	pcu
Co	= (1.5*L+5)/(1-Y)	=	92.2	sec
Cm	= L/(1-Y)	=	56.2	sec
Yult		=	0.630	
R.C.ult	= (Yult-Y)/Y*100%	=	75.1	%
Cp	= 0.9*L/(0.9-Y)	=	60.0	sec
Ymax	= 1-L/C	=	0.500	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	25.1	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

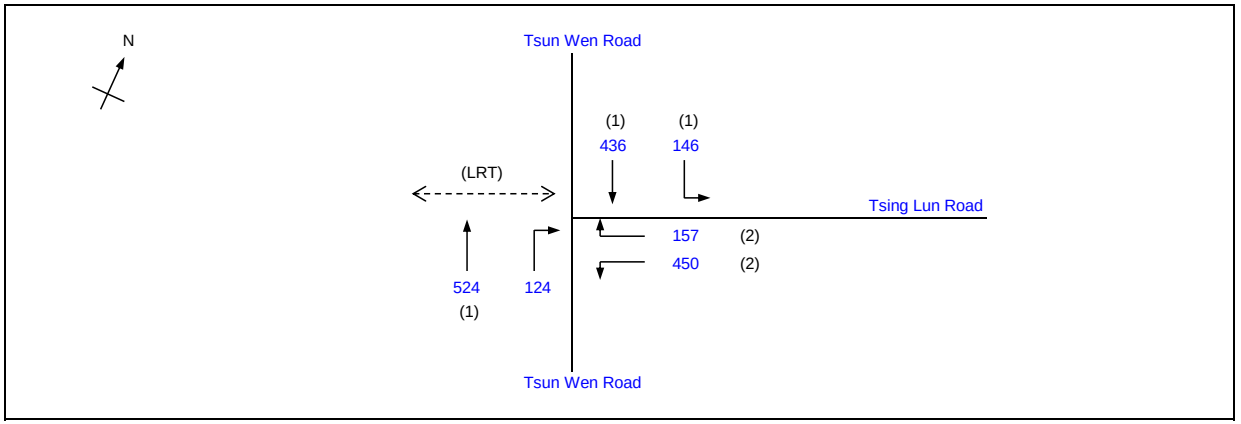
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		419		419	0.00	4030			4030	0.104			10	16	0.476	18	24
RT	A	3.50	1	1	10	O		2105			195	195	1.00	1630	12	100	1730	0.112	0.157		11	16	0.515	18	27
LT	A	3.30	1	1	10		N	1945	169			169	1.00	1691			1691	0.100			10	16	0.458	12	26
SA	A	3.30	1	2	10			4170		656		656	0.00	4170			4170	0.157			16	16	0.720	30	28
LT	B	3.30	2	1	10			2085	367			367	1.00	1813			1813	0.202	0.202		20	20	0.720	30	29
RT	B	3.50	2	1	10			2105			157	157	1.00	1830			1830	0.086			9	20	0.306	12	20
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

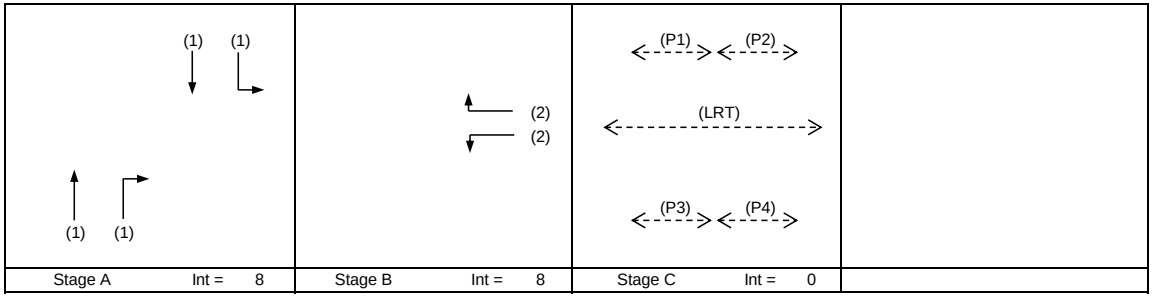
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J6: Tsing Lun Road / Tsun Wen Road	**2028 PM Des**	Checked By:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	72	sec
Sum(y)		Y =	0.378	
Loss time		L =	36	sec
Total Flow		=	1837	pcu
Co	= (1.5*L+5)/(1-Y)	=	94.9	sec
Cm	= L/(1-Y)	=	57.9	sec
Yult		=	0.630	
R.C.ult	= (Yult-Y)/Y*100%	=	66.7	%
Cp	= 0.9*L/(0.9-Y)	=	62.1	sec
Ymax	= 1-L/C	=	0.500	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	19.1	%



Stage A Int = 8 | Stage B Int = 8 | Stage C Int = 0

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

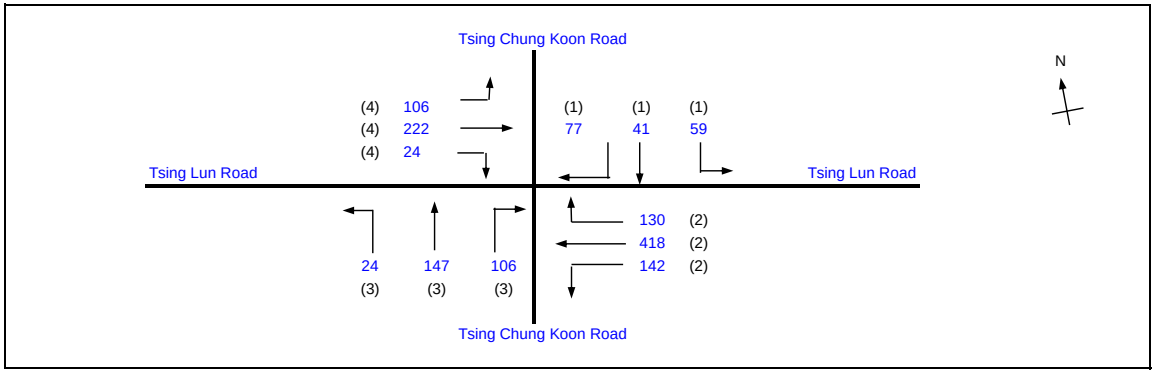
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		524		524	0.00	4030			4030	0.130	0.130		12	12	0.756	27	33
RT	A	3.50	1	1	10	O		2105			124	124	1.00	1630	12	100	1730	0.072			7	12	0.416	12	28
LT	A	3.30	1	1	10		N	1945	146			146	1.00	1691			1691	0.086			8	12	0.501	12	30
SA	A	3.30	1	2	10			4170		436		436	0.00	4170			4170	0.105			10	12	0.608	21	28
LT	B	3.30	2	1	10			2085	450			450	1.00	1813			1813	0.248	0.248		24	24	0.756	36	28
RT	B	3.50	2	1	10			2105			157	157	1.00	1830			1830	0.086			8	24	0.262	12	17
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

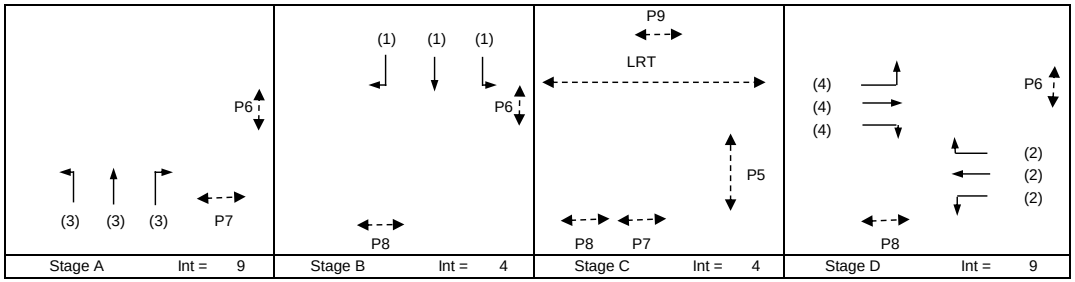
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Ref**		
J7: Tsing Lun Road / Tsing Chung Koon Road	PROJECT NO.: 81460	Prepared By:	JL Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)	FILENAME : J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Checked By:	MM Feb-21
		Reviewed By:	OC Feb-21



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	101 sec
Sum(y)		Y =	0.480
Loss time		L =	39 sec
Total Flow		=	1496 pcu
Co	= (1.5*L+5)/(1-Y)	=	122.1 sec
Cm	= L/(1-Y)	=	75.0 sec
Yult		=	0.608
R.C.ult	= (Yult-Y)/Y*100%	=	26.6 %
Cp	= 0.9*L/(0.9-Y)	=	83.6 sec
Ymax	= 1-L/C	=	0.614
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	15.1 %



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	42	3
P7	A,C	5.5	5	5	6	24	5
P8	B,C,D	7.0	5	6	1	33	6
P9	C	7.5	5	6	1	11	6

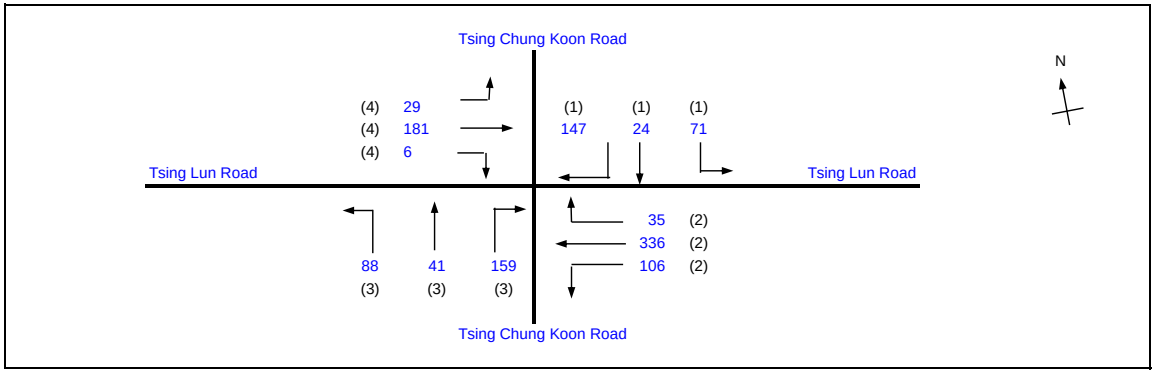
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	24	147		171	0.14	1972			1972	0.087	0.087		11	11	0.782	30	66
RT	A	3.70	3	1	18			2125			106	106	1.00	1962			1962	0.054			7	13	0.437	12	42
LT,SA,RT	B	3.50	1	1	15		N	1965	59	41	77	177	0.77	1825			1825	0.097	0.097		13	13	0.782	30	64
LT,SA	D	3.30	2	1	13		N	1945	142	418		560	0.25	1890			1890	0.296	0.296		38	38	0.782	60	33
RT	D	3.30	2	1	17	O		2085			130	130	1.00	1705	10	59	1764	0.074			10	10	0.782	24	75
LT,SA	D	3.40	4	1	13		N	1955	106	222		329	0.32	1885			1885	0.174			23	23	0.782	42	47
RT	D	3.80	4	1	20	O		2135			24	24	1.00	1772	18	107	1879	0.013			2	2	0.782	6	237
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

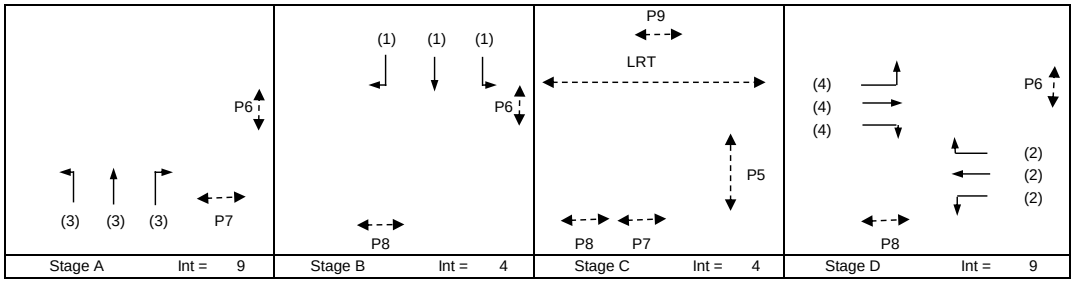
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Ref**	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
J7: Tsing Lun Road / Tsing Chung Koon Road		FILENAME :	Checked By:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)		J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	101	sec
Sum(y)		Y =	0.436	
Loss time		L =	39	sec
Total Flow		=	1225	pcu
Co	= (1.5*L+5)/(1-Y)	=	112.7	sec
Cm	= L/(1-Y)	=	69.2	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	39.2	%
Cp	= 0.9*L/(0.9-Y)	=	75.7	sec
Ymax	= 1-L/C	=	0.614	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	26.6	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	46	3
P7	A,C	5.5	5	5	6	23	5
P8	B,C,D	7.0	5	6	1	39	6
P9	C	7.5	5	6	1	11	6

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	88	41		130	0.68	1888			1888	0.069	0.069		10	10	0.711	18	62
RT	A	3.70	3	1	18			2125			159	159	1.00	1962			1962	0.081			12	19	0.430	18	36
LT,SA,RT	B	3.50	1	1	15		N	1965	71	24	147	242	0.90	1802			1802	0.134	0.134		19	19	0.711	30	46
LT,SA	D	3.30	2	1	13		N	1945	106	336		442	0.24	1893			1893	0.233	0.233		33	33	0.711	48	33
RT	D	3.30	2	1	17	O		2085			35	35	1.00	1705	10	59	1764	0.020			3	3	0.711	6	124
LT,SA	D	3.40	4	1	13		N	1955	29	181		211	0.14	1924			1924	0.109			16	16	0.711	30	50
RT	D	3.80	4	1	20	O		2135			6	6	1.00	1772	18	107	1879	0.003			0	0	0.711	0	525
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

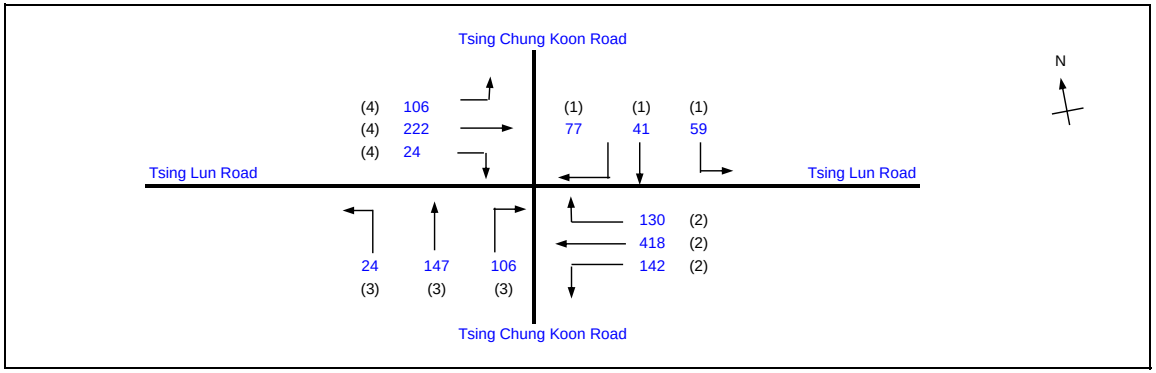
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

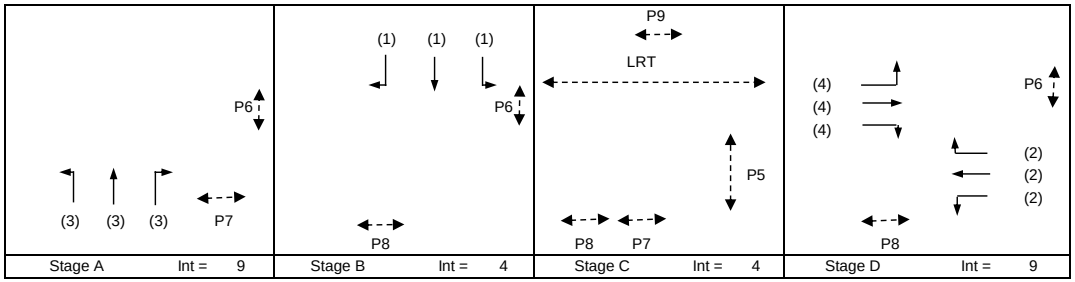
	INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		
J7: Tsing Lun Road / Tsing Chung Koon Road		
2028 AM Design Peak Hour Traffic Flows (Weekday)		

2028 AM Des

PROJECT NO.:	81460	Prepared By:	JL Feb-21
FILENAME :		Checked By:	MM Feb-21
J7_Tsing Lun Rd_Tsing Chung Koon Rd_S		Reviewed By:	OC Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	101	sec
Sum(y)		Y =	0.480	
Loss time		L =	39	sec
Total Flow		=	1496	pcu
Co	= (1.5*L+5)/(1-Y)	=	122.1	sec
Cm	= L/(1-Y)	=	75.0	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	26.6	%
Cp	= 0.9*L/(0.9-Y)	=	83.6	sec
Ymax	= 1-L/C	=	0.614	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	15.1	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	42	3
P7	A,C	5.5	5	5	6	24	5
P8	B,C,D	7.0	5	6	1	33	6
P9	C	7.5	5	6	1	11	6

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	24	147		171	0.14	1972			1972	0.087	0.087		11	11	0.782	30	66
RT	A	3.70	3	1	18			2125			106	106	1.00	1962			1962	0.054			7	13	0.437	12	42
LT,SA,RT	B	3.50	1	1	15		N	1965	59	41	77	177	0.77	1825			1825	0.097	0.097		13	13	0.782	30	64
LT,SA	D	3.30	2	1	13		N	1945	142	418		560	0.25	1890			1890	0.296	0.296		38	38	0.782	60	33
RT	D	3.30	2	1	17	O		2085			130	130	1.00	1705	10	59	1764	0.074			10	10	0.782	24	75
LT,SA	D	3.40	4	1	13		N	1955	106	222		329	0.32	1885			1885	0.174			23	23	0.782	42	47
RT	D	3.80	4	1	20	O		2135			24	24	1.00	1772	18	107	1879	0.013			2	2	0.782	6	237
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED

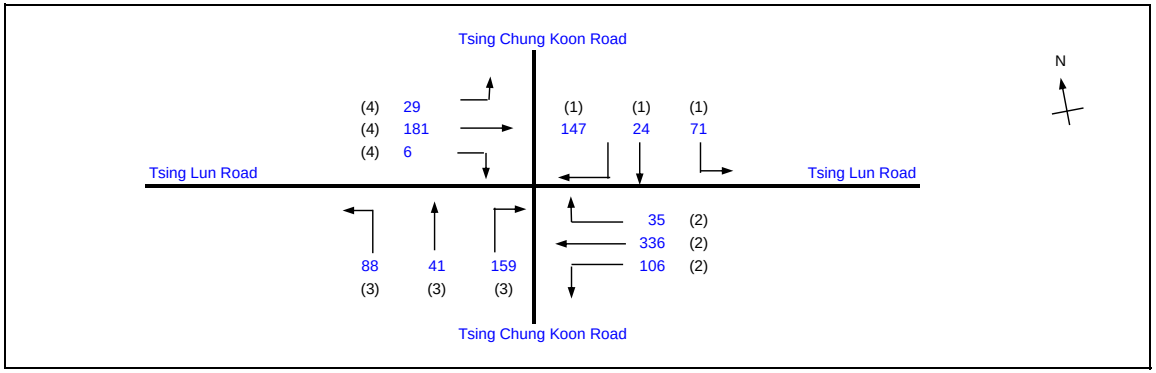
TRAFFIC SIGNAL CALCULATION

INITIALS	DATE

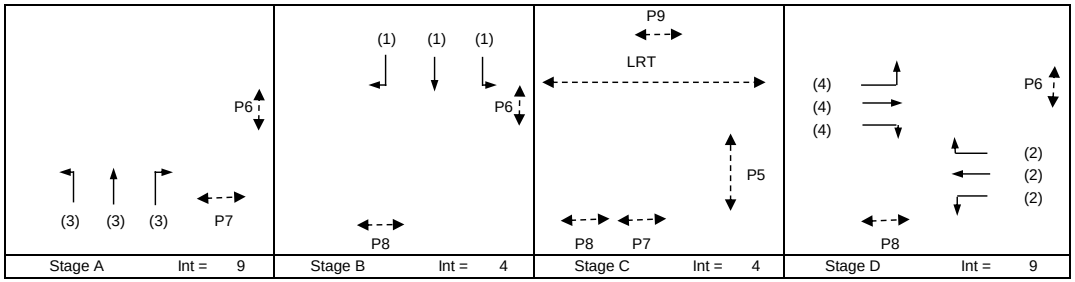
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories
J7: Tsing Lun Road / Tsing Chung Koon Road
2028 PM Design Peak Hour Traffic Flows (Weekday)

2028 PM Des

PROJECT NO.:	81460	Prepared By:	JL Feb-21
FILENAME :		Checked By:	MM Feb-21
J7_Tsing Lun Rd_Tsing Chung Koon Rd_S		Reviewed By:	OC Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	101	sec
Sum(y)		Y =	0.436	
Loss time		L =	39	sec
Total Flow		=	1225	pcu
Co	= (1.5*L+5)/(1-Y)	=	112.7	sec
Cm	= L/(1-Y)	=	69.2	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	39.2	%
Cp	= 0.9*L/(0.9-Y)	=	75.7	sec
Ymax	= 1-L/C	=	0.614	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	26.6	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	46	3
P7	A,C	5.5	5	5	6	23	5
P8	B,C,D	7.0	5	6	1	39	6
P9	C	7.5	5	6	1	11	6

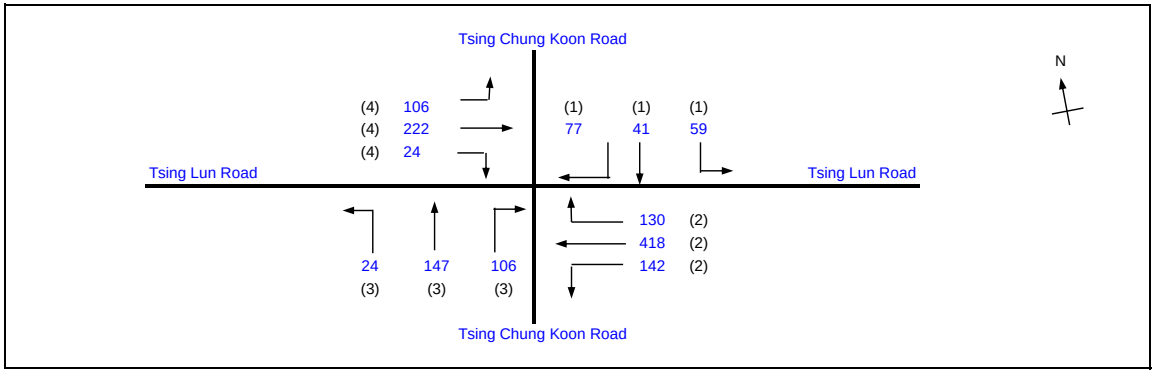
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	88	41		130	0.68	1888			1888	0.069	0.069		10	10	0.711	18	62
RT	A	3.70	3	1	18			2125			159	159	1.00	1962			1962	0.081			12	19	0.430	18	36
LT,SA,RT	B	3.50	1	1	15		N	1965	71	24	147	242	0.90	1802			1802	0.134	0.134		19	19	0.711	30	46
LT,SA	D	3.30	2	1	13		N	1945	106	336		442	0.24	1893			1893	0.233	0.233		33	33	0.711	48	33
RT	D	3.30	2	1	17	O		2085			35	35	1.00	1705	10	59	1764	0.020			3	3	0.711	6	124
LT,SA	D	3.40	4	1	13		N	1955	29	181		211	0.14	1924			1924	0.109			16	16	0.711	30	50
RT	D	3.80	4	1	20	O		2135			6	6	1.00	1772	18	107	1879	0.003			0	0	0.711	0	525
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

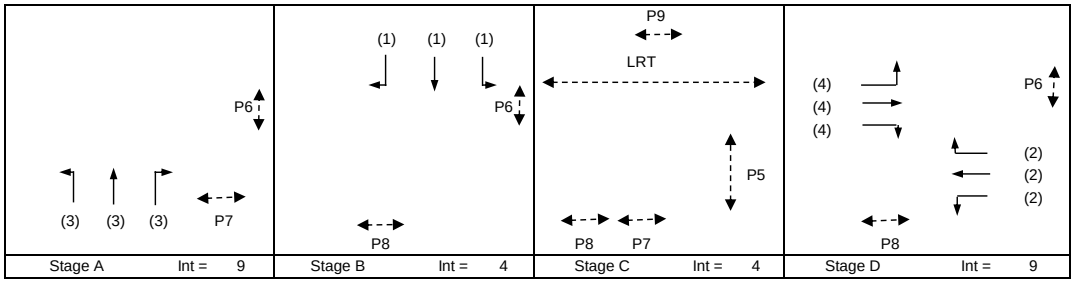
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Ref (Cycle120s)**	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
J7: Tsing Lun Road / Tsing Chung Koon Road		FILENAME :	Checked By:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)		J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.480	
Loss time		L =	39	sec
Total Flow		=	1496	pcu
Co	= (1.5*L+5)/(1-Y)	=	122.1	sec
Cm	= L/(1-Y)	=	75.0	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	26.6	%
Cp	= 0.9*L/(0.9-Y)	=	83.6	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	26.6	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	50	3
P7	A,C	5.5	5	5	6	27	5
P8	B,C,D	7.0	5	6	1	38	6
P9	C	7.5	5	6	1	11	6

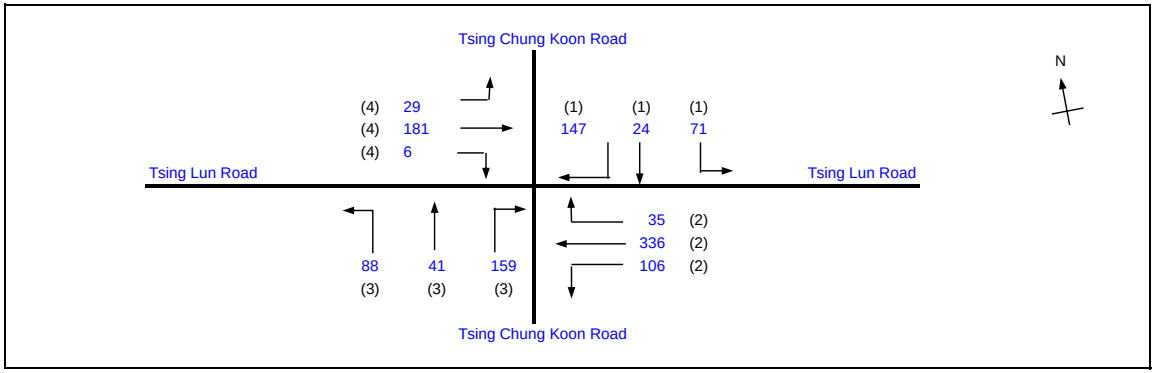
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	24	147		171	0.14	1972			1972	0.087	0.087		15	15	0.711	30	62
RT	A	3.70	3	1	18			2125			106	106	1.00	1962			1962	0.054			9	16	0.397	18	47
LT,SA,RT	B	3.50	1	1	15		N	1965	59	41	77	177	0.77	1825			1825	0.097	0.097		16	16	0.711	30	61
LT,SA	D	3.30	2	1	13		N	1945	142	418		560	0.25	1890			1890	0.296	0.296		50	50	0.711	60	31
RT	D	3.30	2	1	17	O		2085			130	130	1.00	1705	10	50	1755	0.074			12	12	0.711	24	69
LT,SA	D	3.40	4	1	13		N	1955	106	222		329	0.32	1885			1885	0.174			29	29	0.711	48	46
RT	D	3.80	4	1	20	O		2135			24	24	1.00	1772	18	90	1862	0.013			2	2	0.711	6	173
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

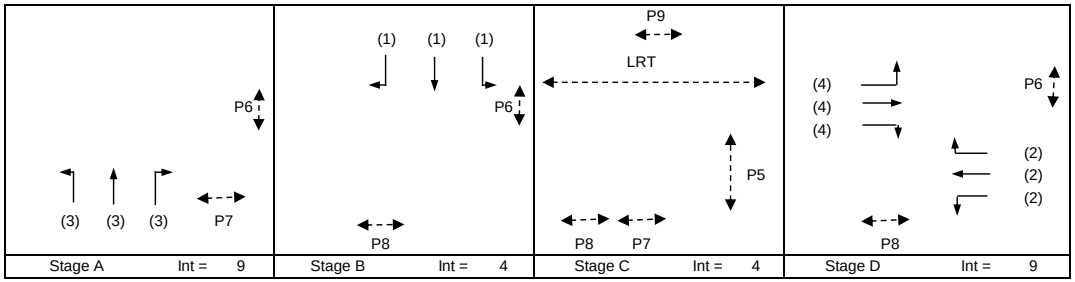
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Ref (Cycle120s)**	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
J7: Tsing Lun Road / Tsing Chung Koon Road		FILENAME :	Checked By:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)		J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.436	
Loss time		L =	39	sec
Total Flow		=	1225	pcu
Co	= (1.5*L+5)/(1-Y)	=	112.7	sec
Cm	= L/(1-Y)	=	69.2	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	39.2	%
Cp	= 0.9*L/(0.9-Y)	=	75.7	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	39.2	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	55	3
P7	A,C	5.5	5	5	6	26	5
P8	B,C,D	7.0	5	6	1	45	6
P9	C	7.5	5	6	1	11	6

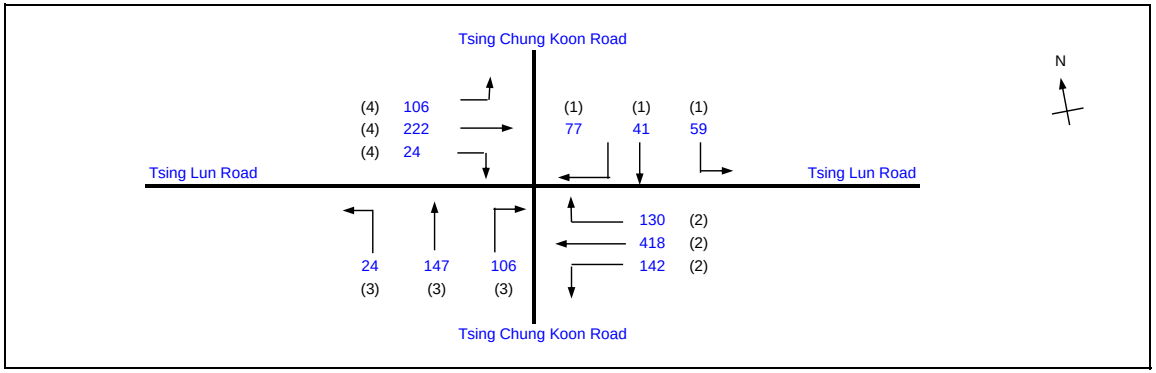
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	88	41		130	0.68	1888			1888	0.069	0.069		13	13	0.647	24	61
RT	A	3.70	3	1	18			2125			159	159	1.00	1962			1962	0.081			15	25	0.391	24	39
LT,SA,RT	B	3.50	1	1	15		N	1965	71	24	147	242	0.90	1802			1802	0.134	0.134		25	25	0.647	36	47
LT,SA	D	3.30	2	1	13		N	1945	106	336		442	0.24	1893			1893	0.233	0.233		43	43	0.647	54	33
RT	D	3.30	2	1	17	O		2085			35	35	1.00	1705	10	50	1755	0.020			4	4	0.647	6	106
LT,SA	D	3.40	4	1	13		N	1955	29	181		211	0.14	1924			1924	0.109			20	20	0.647	30	51
RT	D	3.80	4	1	20	O		2135			6	6	1.00	1772	18	90	1862	0.003			1	1	0.647	0	378
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

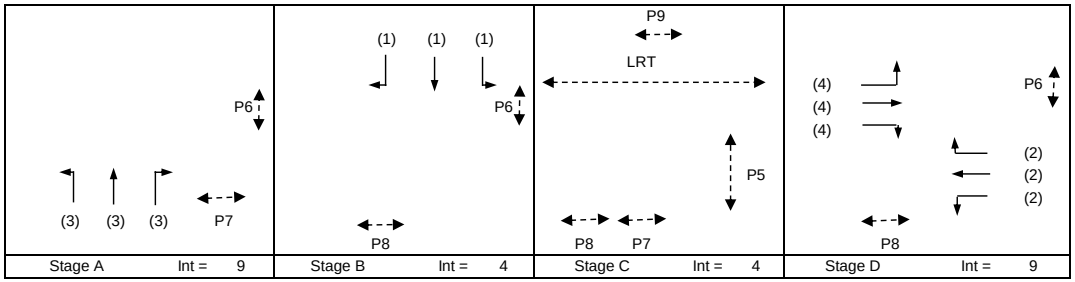
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Des (Cycle120s)**		
J7: Tsing Lun Road / Tsing Chung Koon Road	PROJECT NO.: 81460	Prepared By:	JL Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Checked By:	MM Feb-21
		Reviewed By:	OC Feb-21



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.480
Loss time		L =	39 sec
Total Flow		=	1496 pcu
Co	= (1.5*L+5)/(1-Y)	=	122.1 sec
Cm	= L/(1-Y)	=	75.0 sec
Yult		=	0.608
R.C.ult	= (Yult-Y)/Y*100%	=	26.6 %
Cp	= 0.9*L/(0.9-Y)	=	83.6 sec
Ymax	= 1-L/C	=	0.675
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	26.6 %



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	50	3
P7	A,C	5.5	5	5	6	27	5
P8	B,C,D	7.0	5	6	1	38	6
P9	C	7.5	5	6	1	11	6

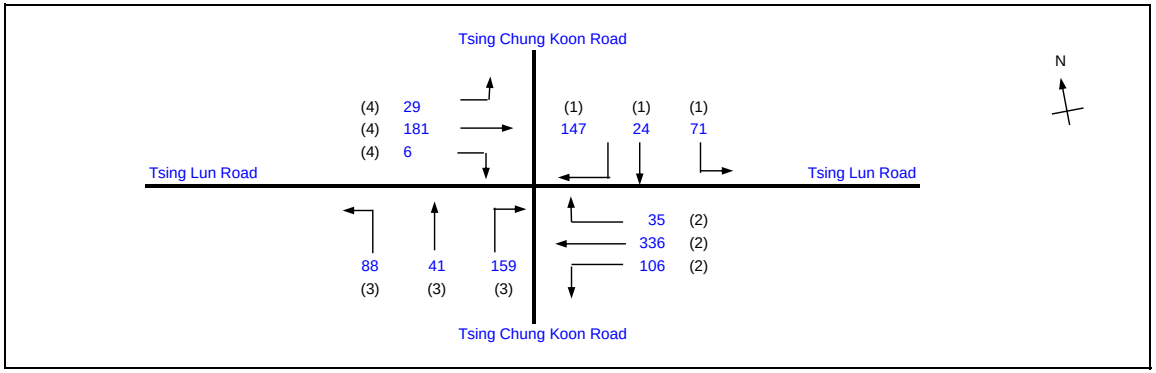
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	24	147		171	0.14	1972			1972	0.087	0.087		15	15	0.711	30	62
RT	A	3.70	3	1	18			2125			106	106	1.00	1962			1962	0.054			9	16	0.397	18	47
LT,SA,RT	B	3.50	1	1	15		N	1965	59	41	77	177	0.77	1825			1825	0.097	0.097		16	16	0.711	30	61
LT,SA	D	3.30	2	1	13		N	1945	142	418		560	0.25	1890			1890	0.296	0.296		50	50	0.711	60	31
RT	D	3.30	2	1	17	O		2085			130	130	1.00	1705	10	50	1755	0.074			12	12	0.711	24	69
LT,SA	D	3.40	4	1	13		N	1955	106	222		329	0.32	1885			1885	0.174			29	29	0.711	48	46
RT	D	3.80	4	1	20	O		2135			24	24	1.00	1772	18	90	1862	0.013			2	2	0.711	6	173
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

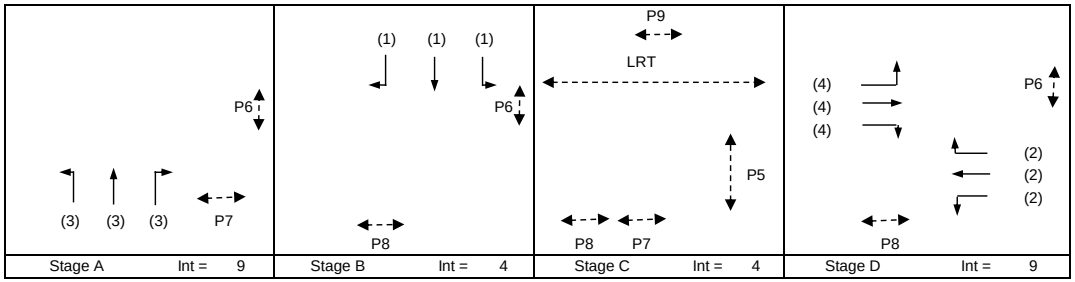
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Des (Cycle120s)**		
J7: Tsing Lun Road / Tsing Chung Koon Road	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Checked By:	MM	Feb-21
		Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.436	
Loss time		L =	39	sec
Total Flow		=	1225	pcu
Co	= (1.5*L+5)/(1-Y)	=	112.7	sec
Cm	= L/(1-Y)	=	69.2	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	39.2	%
Cp	= 0.9*L/(0.9-Y)	=	75.7	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	39.2	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	55	3
P7	A,C	5.5	5	5	6	26	5
P8	B,C,D	7.0	5	6	1	45	6
P9	C	7.5	5	6	1	11	6

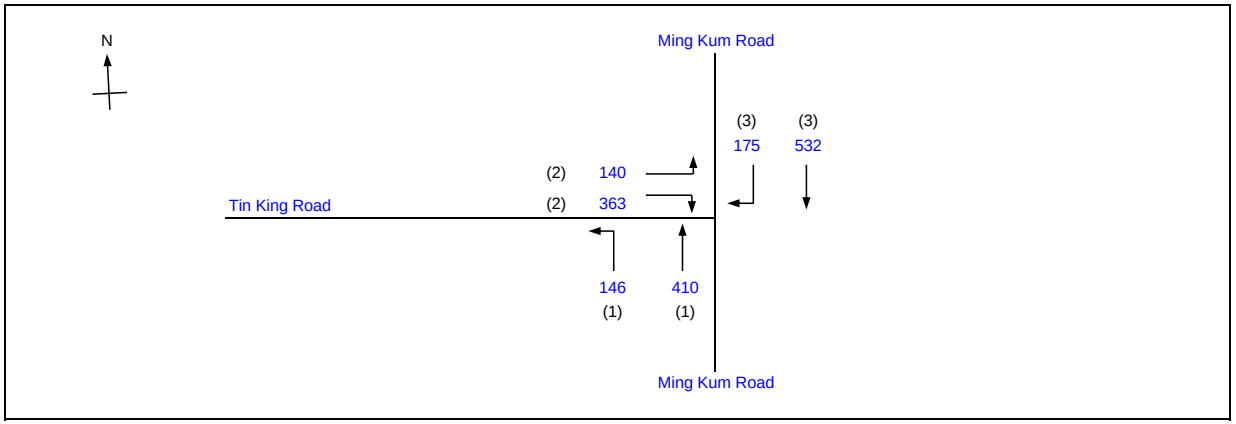
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	88	41		130	0.68	1888			1888	0.069	0.069		13	13	0.647	24	61
RT	A	3.70	3	1	18			2125			159	159	1.00	1962			1962	0.081			15	25	0.391	24	39
LT,SA,RT	B	3.50	1	1	15		N	1965	71	24	147	242	0.90	1802			1802	0.134	0.134		25	25	0.647	36	47
LT,SA	D	3.30	2	1	13		N	1945	106	336		442	0.24	1893			1893	0.233	0.233		43	43	0.647	54	33
RT	D	3.30	2	1	17	O		2085			35	35	1.00	1705	10	50	1755	0.020			4	4	0.647	6	106
LT,SA	D	3.40	4	1	13		N	1955	29	181		211	0.14	1924			1924	0.109			20	20	0.647	30	51
RT	D	3.80	4	1	20	O		2135			6	6	1.00	1772	18	90	1862	0.003			1	1	0.647	0	378
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

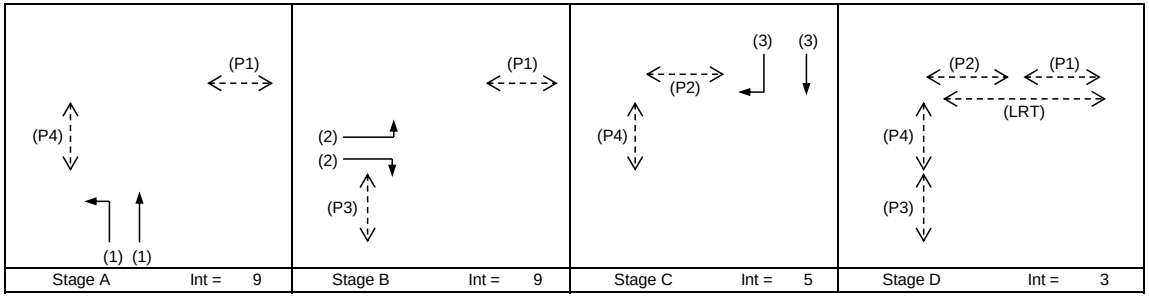
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 AM Ref**	Checked By:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.496	
Loss time		L =	37	sec
Total Flow		=	1766	pcu
Co	= (1.5*L+5)/(1-Y)	=	120.0	sec
Cm	= L/(1-Y)	=	73.4	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	25.5	%
Cp	= 0.9*L/(0.9-Y)	=	82.4	sec
Ymax	= 1-L/C	=	0.657	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	19.3	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		39	6
P2	C	6.8	5	6		25	6
P3	B	4.5	5	4		11	4
P4	A,C	6.8	5	6		50	6

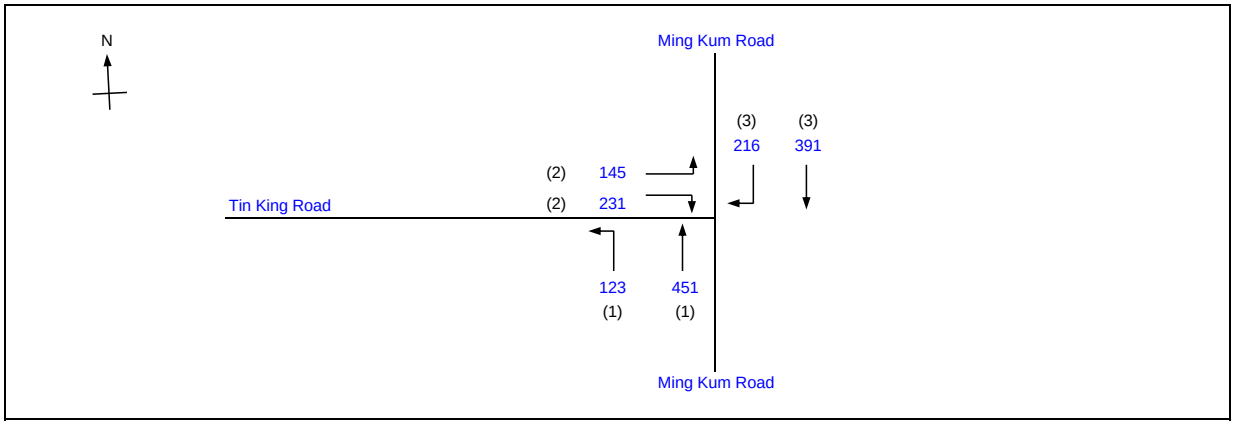
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	146	124		270	0.54	2014			2014	0.134			19	19	0.754	42	52
SA	A	3.80	1	1				2135		286		286	0.00	2135			2135	0.134	0.134		19	19	0.754	42	51
LT	B	3.50	2	1	15		N	1965	140			140	1.00	1786			1786	0.078	0.185		11	26	0.320	18	32
RT	B	3.50	2	1	21			2105			363	363	1.00	1965			1965	0.185			26	26	0.754	48	44
SA	C	3.50	3	1			N	1965		348		348	0.00	1965			1965	0.177			25	25	0.754	48	45
SA,RT	C	3.50	3	1	18			2105		183	175	359	0.49	2023			2023	0.177	0.177		25	25	0.754	48	45
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

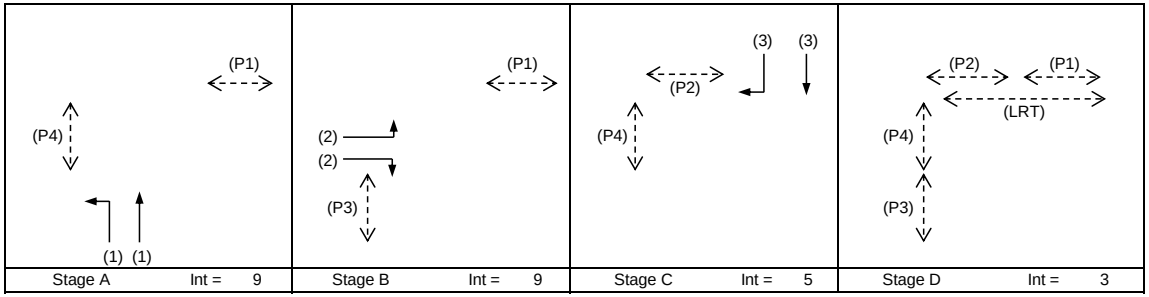
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 PM Ref**	Checked By:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.409	
Loss time		L =	37	sec
Total Flow		=	1557	pcu
Co	= (1.5*L+5)/(1-Y)	=	102.3	sec
Cm	= L/(1-Y)	=	62.6	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	52.3	%
Cp	= 0.9*L/(0.9-Y)	=	67.8	sec
Ymax	= 1-L/C	=	0.657	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	44.7	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		47	6
P2	C	6.8	5	6		27	6
P3	B	4.5	5	4		14	4
P4	A,C	6.8	5	6		56	6

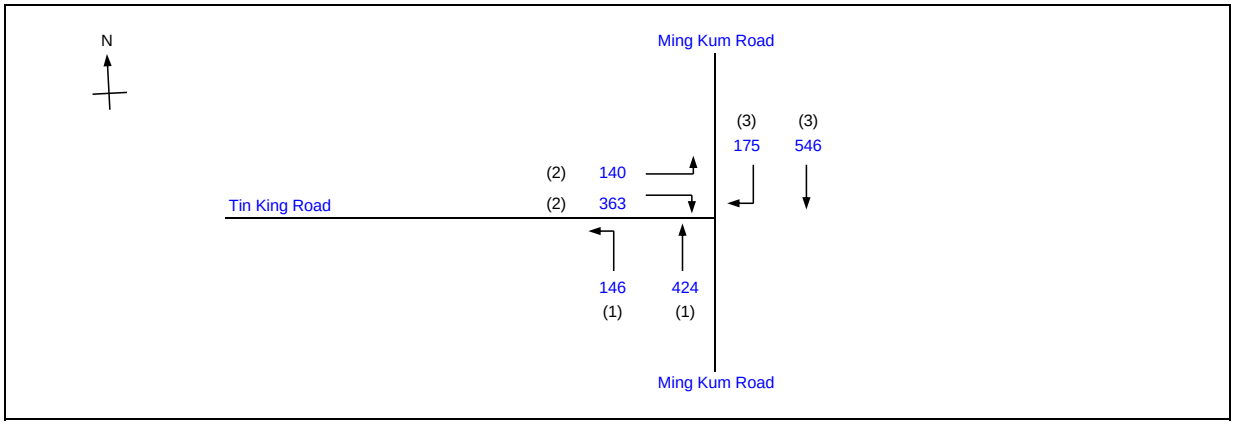
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	123	157		280	0.44	2031			2031	0.138			24	24	0.622	36	40
SA	A	3.80	1	1				2135		294		294	0.00	2135			2135	0.138	0.138		24	24	0.622	36	40
LT	B	3.50	2	1	15		N	1965	145			145	1.00	1786			1786	0.081	0.117		14	20	0.429	18	38
RT	B	3.50	2	1	21			2105			231	231	1.00	1965			1965	0.117			20	20	0.622	30	43
SA	C	3.50	3	1			N	1965		302		302	0.00	1965			1965	0.154			27	27	0.622	36	38
SA,RT	C	3.50	3	1	18			2105		89	216	305	0.71	1988			1988	0.154	0.154		27	27	0.622	36	38
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

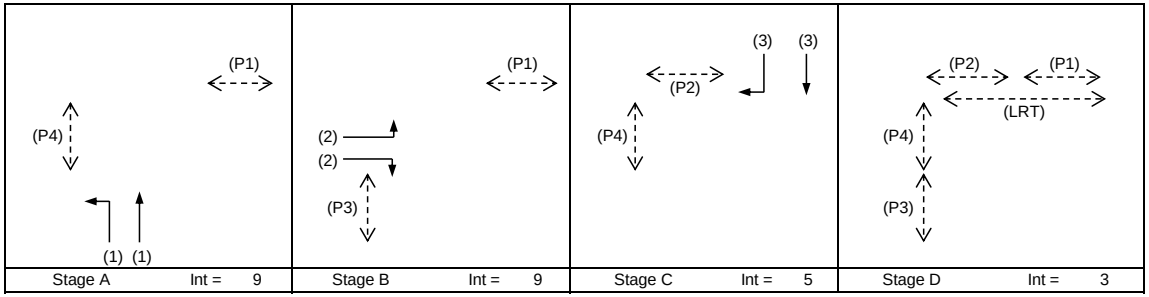
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 AM Des**	Checked By:	MM	Feb-21
2028 AM DesignPeak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.503	
Loss time		L =	37	sec
Total Flow		=	1794	pcu
Co	= (1.5*L+5)/(1-Y)	=	121.7	sec
Cm	= L/(1-Y)	=	74.4	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	23.8	%
Cp	= 0.9*L/(0.9-Y)	=	83.8	sec
Ymax	= 1-L/C	=	0.657	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	17.7	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		39	6
P2	C	6.8	5	6		26	6
P3	B	4.5	5	4		11	4
P4	A,C	6.8	5	6		50	6

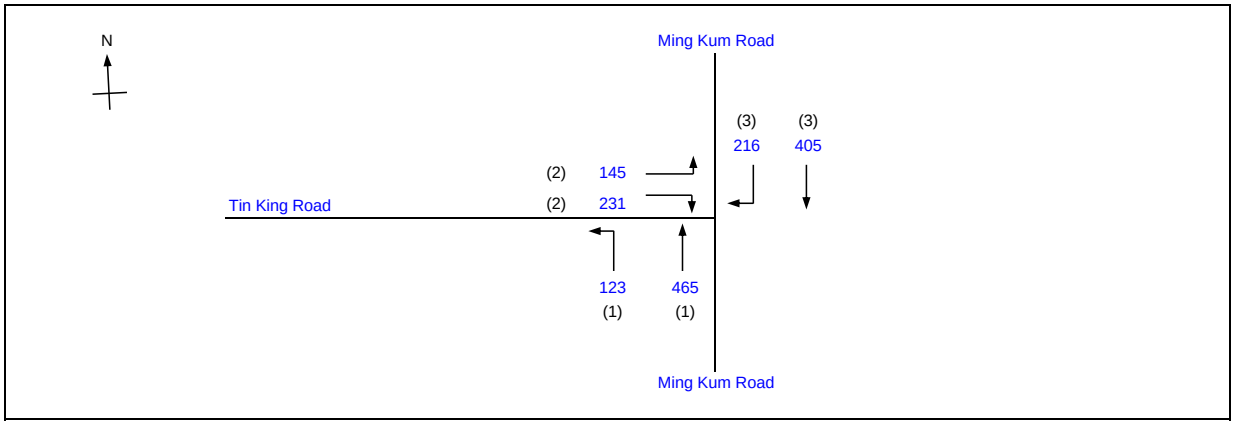
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	146	131		277	0.53	2016			2016	0.137			19	19	0.765	42	52
SA	A	3.80	1	1				2135		293		293	0.00	2135			2135	0.137	0.137		19	19	0.765	42	52
LT	B	3.50	2	1	15		N	1965	140			140	1.00	1786			1786	0.078	0.185		11	26	0.324	18	32
RT	B	3.50	2	1	21			2105			363	363	1.00	1965			1965	0.185			26	26	0.765	48	45
SA	C	3.50	3	1			N	1965		355		355	0.00	1965			1965	0.181			26	26	0.765	48	46
SA,RT	C	3.50	3	1	18			2105		191	175	366	0.48	2024			2024	0.181	0.181		26	26	0.765	48	46
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

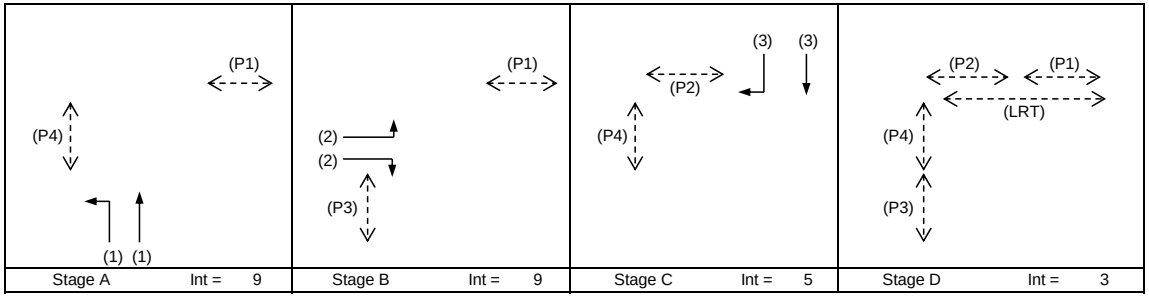
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 PM Des**	Checked By:	MM	Feb-21
2028 PM DesignPeak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.416	
Loss time		L =	37	sec
Total Flow		=	1585	pcu
Co	= (1.5*L+5)/(1-Y)	=	103.5	sec
Cm	= L/(1-Y)	=	63.3	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	49.8	%
Cp	= 0.9*L/(0.9-Y)	=	68.7	sec
Ymax	= 1-L/C	=	0.657	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	42.4	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		47	6
P2	C	6.8	5	6		27	6
P3	B	4.5	5	4		14	4
P4	A,C	6.8	5	6		56	6

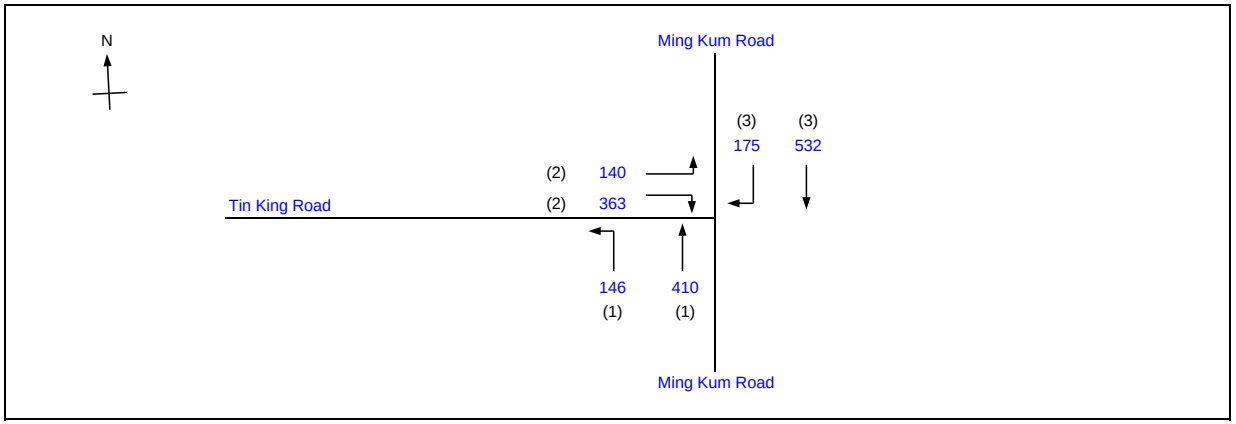
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	123	164		287	0.43	2033			2033	0.141			24	24	0.632	36	40
SA	A	3.80	1	1				2135		301		301	0.00	2135			2135	0.141	0.141		24	24	0.632	42	40
LT	B	3.50	2	1	15		N	1965	145			145	1.00	1786			1786	0.081	0.117		14	20	0.436	18	39
RT	B	3.50	2	1	21			2105			231	231	1.00	1965			1965	0.117			20	20	0.632	30	44
SA	C	3.50	3	1			N	1965		309		309	0.00	1965			1965	0.157			27	27	0.632	36	38
SA,RT	C	3.50	3	1	18			2105		96	216	313	0.69	1990			1990	0.157	0.157		27	27	0.632	42	38
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

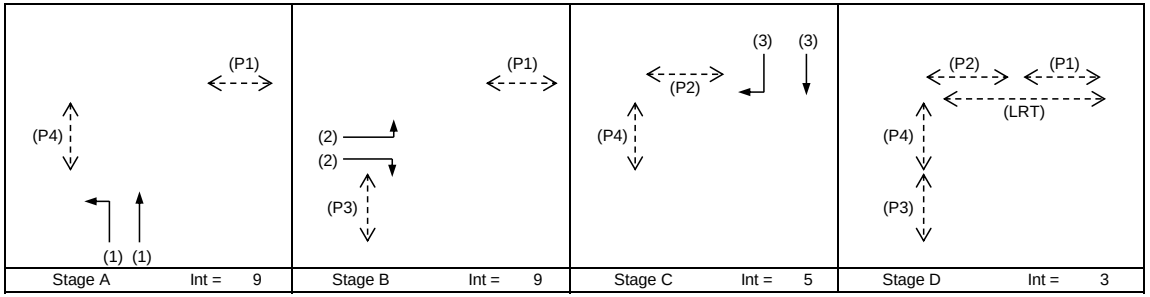
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 AM Ref (Cycle120s)**	Checked By:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.496	
Loss time		L =	37	sec
Total Flow		=	1766	pcu
Co	= (1.5*L+5)/(1-Y)	=	120.0	sec
Cm	= L/(1-Y)	=	73.4	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	25.5	%
Cp	= 0.9*L/(0.9-Y)	=	82.4	sec
Ymax	= 1-L/C	=	0.692	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	25.5	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		45	6
P2	C	6.8	5	6		30	6
P3	B	4.5	5	4		13	4
P4	A,C	6.8	5	6		57	6

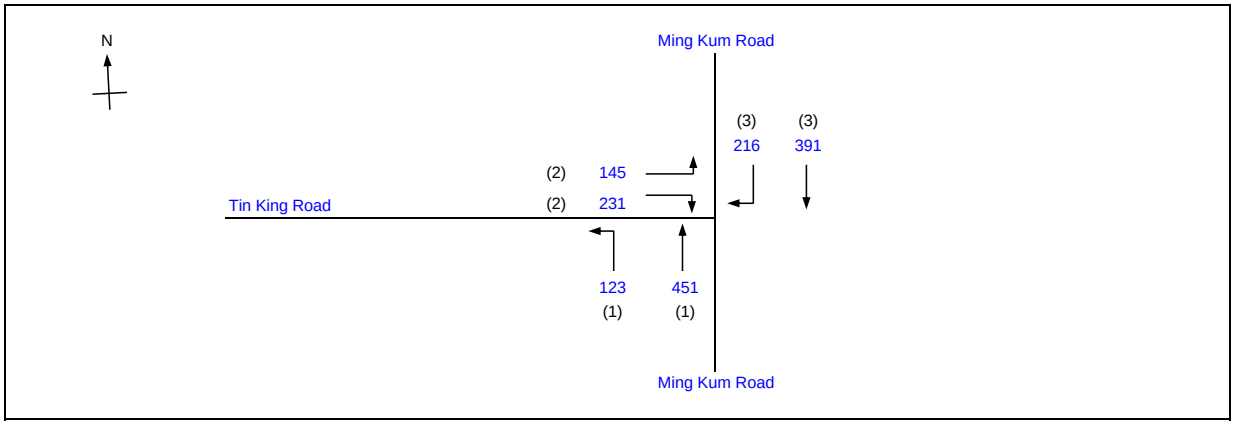
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	146	124		270	0.54	2014			2014	0.134			22	22	0.717	42	52
SA	A	3.80	1	1				2135		286		286	0.00	2135			2135	0.134	0.134		22	22	0.717	42	51
LT	B	3.50	2	1	15		N	1965	140			140	1.00	1786			1786	0.078	0.185		13	31	0.304	18	34
RT	B	3.50	2	1	21			2105			363	363	1.00	1965			1965	0.185			31	31	0.717	48	45
SA	C	3.50	3	1			N	1965		348		348	0.00	1965			1965	0.177			30	30	0.717	48	46
SA,RT	C	3.50	3	1	18			2105		183	175	359	0.49	2023			2023	0.177	0.177		30	30	0.717	54	45
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

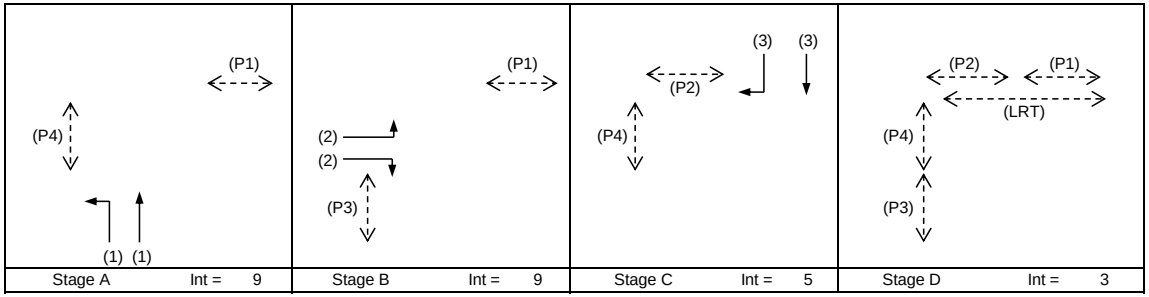
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 PM Ref (Cycle120s)**	Checked By:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.409	
Loss time		L =	37	sec
Total Flow		=	1557	pcu
Co	= (1.5*L+5)/(1-Y)	=	102.3	sec
Cm	= L/(1-Y)	=	62.6	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	52.3	%
Cp	= 0.9*L/(0.9-Y)	=	67.8	sec
Ymax	= 1-L/C	=	0.692	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	52.3	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		53	6
P2	C	6.8	5	6		31	6
P3	B	4.5	5	4		16	4
P4	A,C	6.8	5	6		64	6

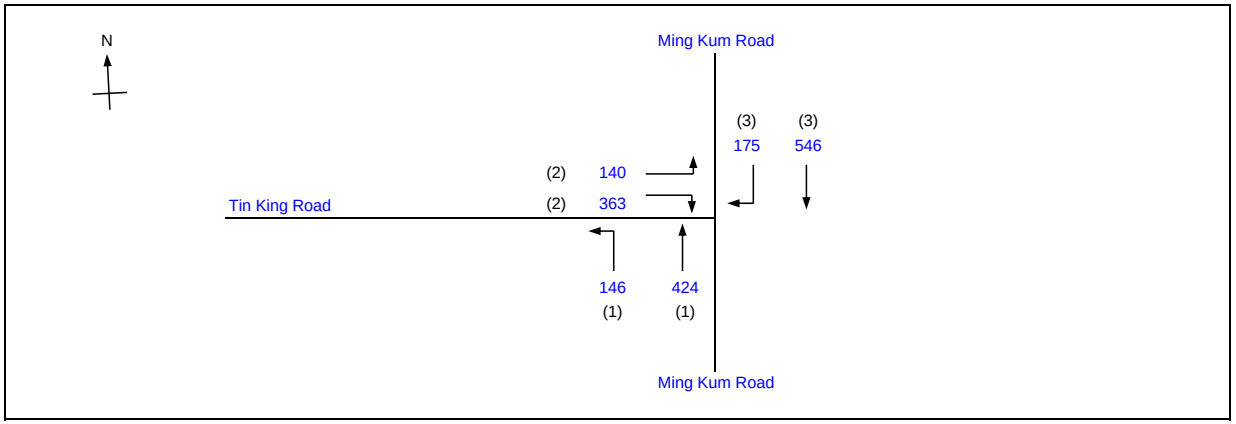
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	123	157		280	0.44	2031			2031	0.138			28	28	0.591	42	42
SA	A	3.80	1	1				2135		294		294	0.00	2135			2135	0.138	0.138		28	28	0.591	42	42
LT	B	3.50	2	1	15		N	1965	145			145	1.00	1786			1786	0.081	0.117		16	24	0.408	18	41
RT	B	3.50	2	1	21			2105			231	231	1.00	1965			1965	0.117			24	24	0.591	36	45
SA	C	3.50	3	1			N	1965		302		302	0.00	1965			1965	0.154			31	31	0.591	42	40
SA,RT	C	3.50	3	1	18			2105		89	216	305	0.71	1988			1988	0.154	0.154		31	31	0.591	42	39
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

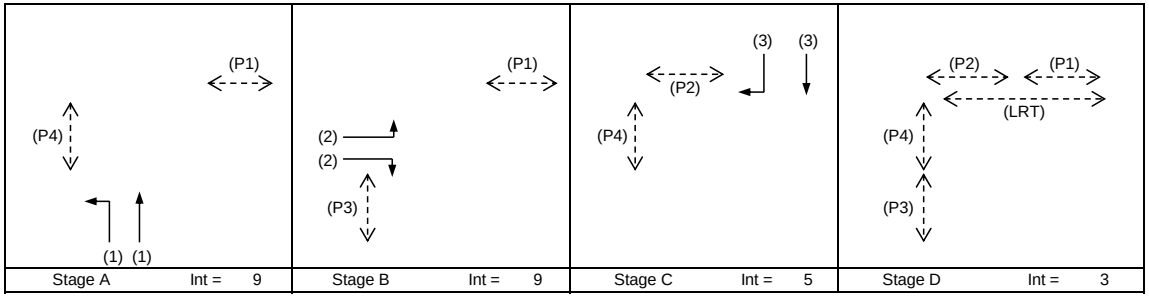
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 AM Des (Cycle120s)**	Checked By:	MM	Feb-21
2028 AM DesignPeak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.503	
Loss time		L =	37	sec
Total Flow		=	1794	pcu
Co	= (1.5*L+5)/(1-Y)	=	121.7	sec
Cm	= L/(1-Y)	=	74.4	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	23.8	%
Cp	= 0.9*L/(0.9-Y)	=	83.8	sec
Ymax	= 1-L/C	=	0.692	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	23.8	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		45	6
P2	C	6.8	5	6		30	6
P3	B	4.5	5	4		13	4
P4	A,C	6.8	5	6		58	6

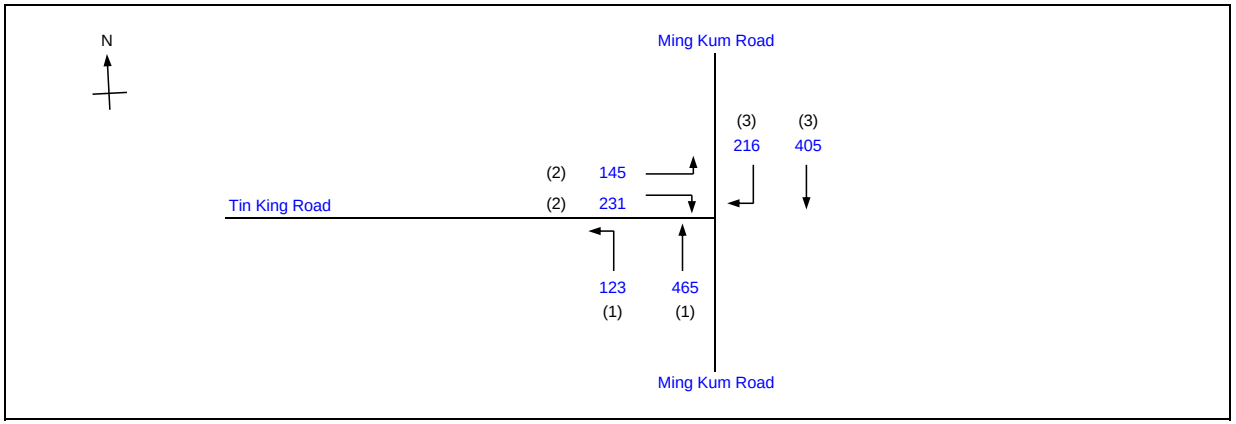
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	146	131		277	0.53	2016			2016	0.137			23	23	0.727	42	52
SA	A	3.80	1	1				2135		293		293	0.00	2135			2135	0.137	0.137		23	23	0.727	48	52
LT	B	3.50	2	1	15		N	1965	140			140	1.00	1786			1786	0.078	0.185		13	30	0.308	18	34
RT	B	3.50	2	1	21			2105			363	363	1.00	1965			1965	0.185			30	30	0.727	54	45
SA	C	3.50	3	1			N	1965		355		355	0.00	1965			1965	0.181			30	30	0.727	48	46
SA,RT	C	3.50	3	1	18			2105		191	175	366	0.48	2024			2024	0.181	0.181		30	30	0.727	54	46
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

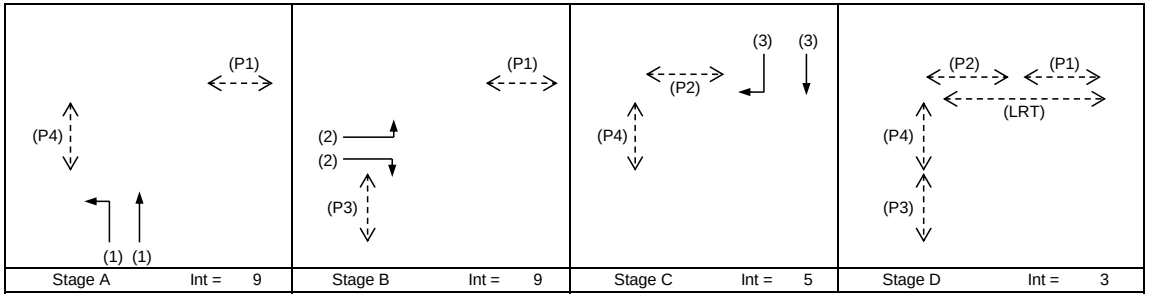
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 PM Des (Cycle120s)**	Checked By:	MM	Feb-21
2028 PM DesignPeak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.416	
Loss time		L =	37	sec
Total Flow		=	1585	pcu
Co	= (1.5*L+5)/(1-Y)	=	103.5	sec
Cm	= L/(1-Y)	=	63.3	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	49.8	%
Cp	= 0.9*L/(0.9-Y)	=	68.7	sec
Ymax	= 1-L/C	=	0.692	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	49.8	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		53	6
P2	C	6.8	5	6		31	6
P3	B	4.5	5	4		16	4
P4	A,C	6.8	5	6		65	6

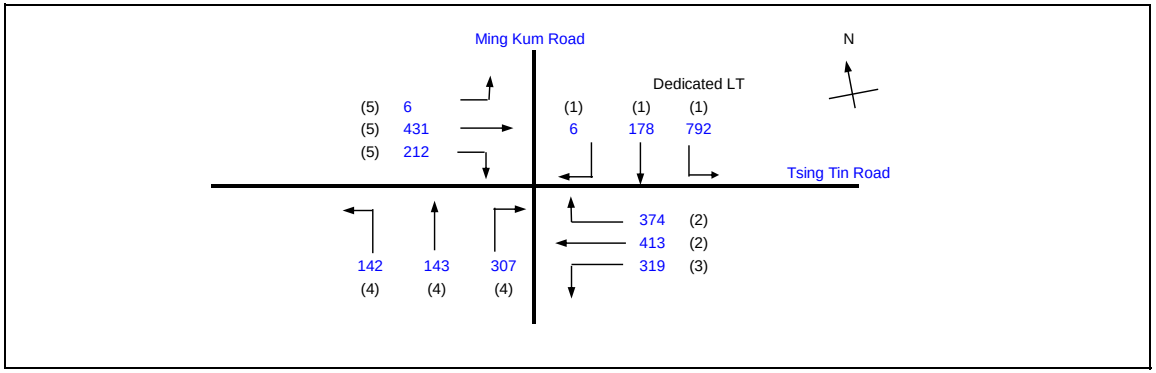
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	123	164		287	0.43	2033			2033	0.141			28	28	0.601	42	42
SA	A	3.80	1	1				2135		301		301	0.00	2135			2135	0.141	0.141		28	28	0.601	42	42
LT	B	3.50	2	1	15		N	1965	145			145	1.00	1786			1786	0.081	0.117		16	23	0.414	18	41
RT	B	3.50	2	1	21			2105			231	231	1.00	1965			1965	0.117			23	23	0.601	36	46
SA	C	3.50	3	1			N	1965		309		309	0.00	1965			1965	0.157			31	31	0.601	42	40
SA,RT	C	3.50	3	1	18			2105		96	216	313	0.69	1990			1990	0.157	0.157		31	31	0.601	42	40
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

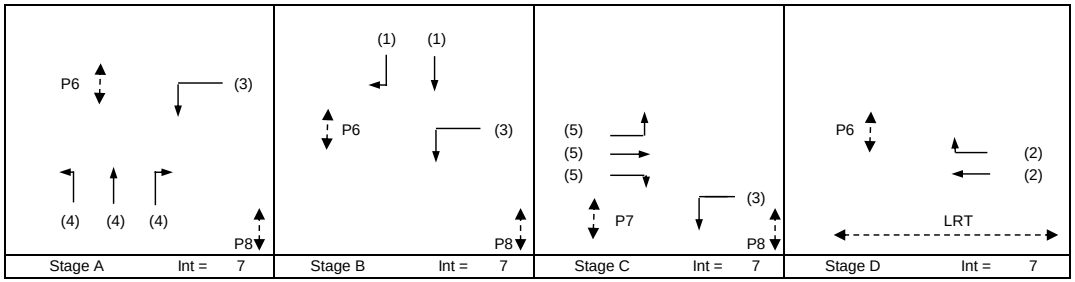
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Ref**	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
J9: Tsing Tin Road / Ming Kum Road		FILENAME :	Checked By:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)		J9_Tsing Tin Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	145	sec
Sum(y)		Y =	0.536	
Loss time		L =	24	sec
Total Flow		=	2530	pcu
Co	= (1.5*L+5)/(1-Y)	=	88.3	sec
Cm	= L/(1-Y)	=	51.7	sec
Yult		=	0.720	
R.C.ult	= (Yult-Y)/Y*100%	=	34.4	%
Cp	= 0.9*L/(0.9-Y)	=	59.3	sec
Ymax	= 1-L/C	=	0.834	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	40	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		102	8
P7	C	5	5	4	5	20	4
P8	A,B,C	8	5	7		67	7

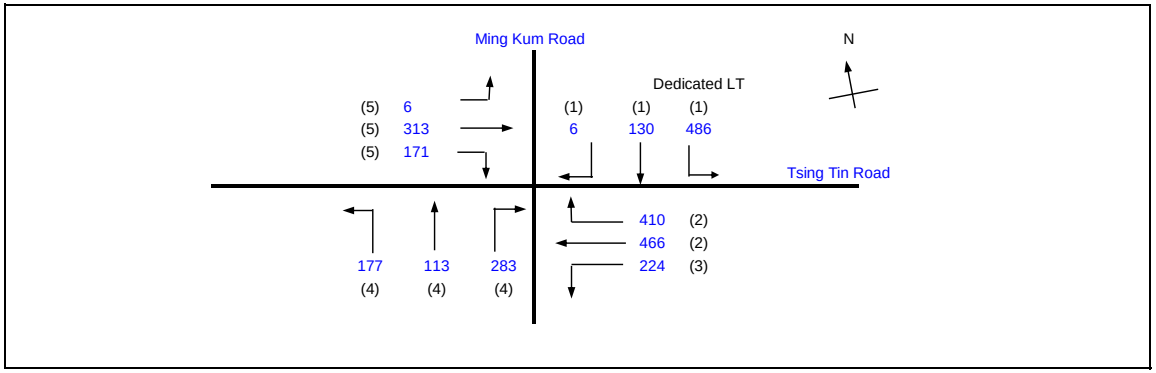
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				24					
LT	A	3.30	4	1	12		N	1945	142			142	1.00	1729			1729	0.082			18	39	0.306	24	40
SA,RT	A	3.30	4	1	18			2085		143	215	358	0.00	2085			2085	0.172	0.172		39	39	0.642	60	48
RT	A	3.30	4	1	16			2085			92	92	3.33	1588			1588	0.058			13	39	0.217	12	38
LT	A,B,C	3.50	3	1	21		N	1965	319			319	1.00	1834			1834	0.174			39	39	0.642	54	48
SA	B	3.30	1	2			N	4030		178		178	0.00	4030			4030	0.044	0.044		10	10	0.642	18	70
RT	B	3.30	1	1	20			2085			6	6	1.00	1940			1940	0.003			1	10	0.044	0	57
LT,SA	C	3.40	5	1	13		N	1955	6	206		212	0.03	1949			1949	0.109			25	25	0.642	42	59
SA,RT	C	3.40	5	1	15			2095		225	2	227	0.01	2093			2093	0.109	0.109		25	25	0.642	42	59
RT	C	3.40	5	1	18			2095			210	210	1.00	1934			1934	0.109			25	25	0.642	42	59
SA	D	3.40	2	1			N	1955		413		413	0.00	1955			1955	0.211	0.211		48	48	0.642	66	42
RT	D	3.40	2	2	18		N	4050			374	374	1.00	3738			3738	0.100			23	48	0.304	30	33

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

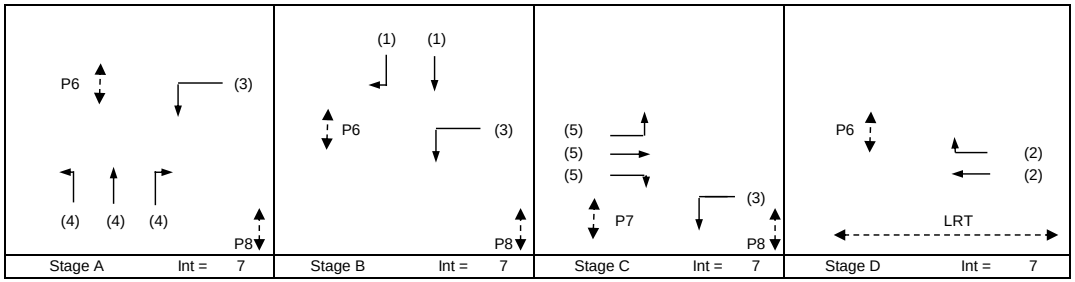
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Ref**	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
J9: Tsing Tin Road / Ming Kum Road		FILENAME :	Checked By:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)		J9_Tsing Tin Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	145	sec
Sum(y)		Y =	0.499	
Loss time		L =	24	sec
Total Flow		=	2299	pcu
Co	= (1.5*L+5)/(1-Y)	=	81.9	sec
Cm	= L/(1-Y)	=	47.9	sec
Yult		=	0.720	
R.C.ult	= (Yult-Y)/Y*100%	=	44.2	%
Cp	= 0.9*L/(0.9-Y)	=	53.9	sec
Ymax	= 1-L/C	=	0.834	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	50	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		107	8
P7	C	5	5	4	5	16	4
P8	A,B,C	8	5	7		56	7

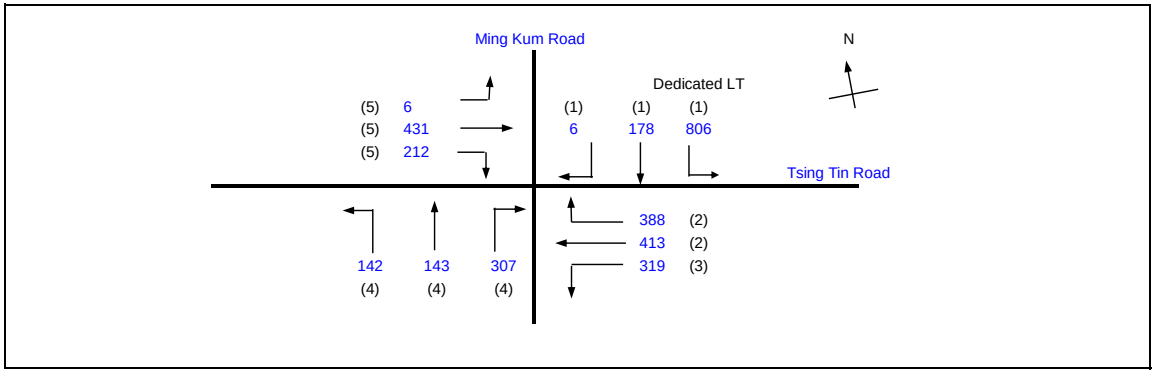
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				24					
LT	A	3.30	4	1	12		N	1945	177			177	1.00	1729			1729	0.102			25	35	0.419	30	44
SA,RT	A	3.30	4	1	18			2085		113	191	305	0.00	2085			2085	0.146	0.146		35	35	0.598	54	48
RT	A	3.30	4	1	16			2085			92	92	3.08	1618			1618	0.057			14	35	0.233	12	41
LT	A,B,C	3.50	3	1	21		N	1965	224			224	1.00	1834			1834	0.122			30	30	0.598	42	53
SA	B	3.30	1	2			N	4030		130		130	0.00	4030			4030	0.032	0.032		8	8	0.598	15	71
RT	B	3.30	1	1	20			2085			6	6	1.00	1940			1940	0.003			1	8	0.057	0	60
LT,SA	C	3.40	5	1	13		N	1955	6	154		160	0.04	1947			1947	0.082			20	20	0.598	30	62
SA,RT	C	3.40	5	1	15			2095		159	13	172	0.07	2080			2080	0.083	0.083		20	20	0.598	30	61
RT	C	3.40	5	1	18			2095			158	158	1.00	1934			1934	0.082			20	20	0.598	30	62
SA	D	3.40	2	1			N	1955		466		466	0.00	1955			1955	0.238	0.238		58	58	0.598	66	34
RT	D	3.40	2	2	18		N	4050			410	410	1.00	3738			3738	0.110			27	58	0.275	27	27

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

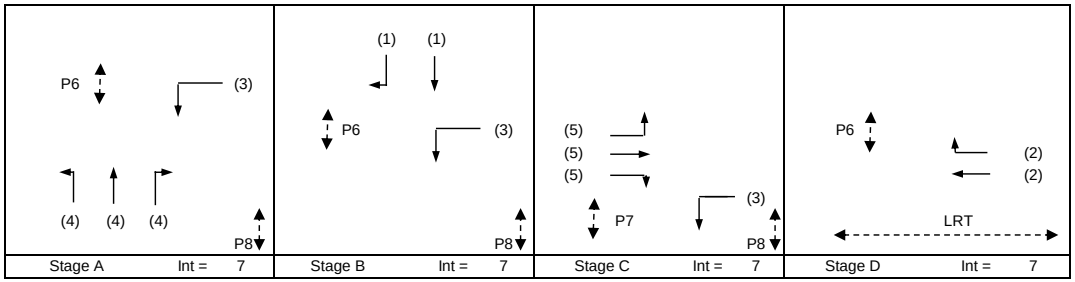
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Des**	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
J9: Tsing Tin Road / Ming Kum Road		FILENAME :	Checked By:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J9_Tsing Tin Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	145 sec
Sum(y)		Y =	0.536
Loss time		L =	24 sec
Total Flow		=	2544 pcu
Co	= (1.5*L+5)/(1-Y)	=	88.3 sec
Cm	= L/(1-Y)	=	51.7 sec
Yult		=	0.720
R.C.ult	= (Yult-Y)/Y*100%	=	34.4 %
Cp	= 0.9*L/(0.9-Y)	=	59.3 sec
Ymax	= 1-L/C	=	0.834
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	40 %



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		102	8
P7	C	5	5	4	5	20	4
P8	A,B,C	8	5	7		67	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				24					
LT	A	3.30	4	1	12		N	1945	142			142	1.00	1729			1729	0.082			18	39	0.306	24	40
SA,RT	A	3.30	4	1	18			2085		143	215	358	0.00	2085			2085	0.172	0.172		39	39	0.642	60	48
RT	A	3.30	4	1	16			2085			92	92	3.33	1588			1588	0.058			13	39	0.217	12	38
LT	A,B,C	3.50	3	1	21		N	1965	319			319	1.00	1834			1834	0.174			39	39	0.642	54	48
SA	B	3.30	1	2			N	4030		178		178	0.00	4030			4030	0.044	0.044		10	10	0.642	18	70
RT	B	3.30	1	1	20			2085			6	6	1.00	1940			1940	0.003			1	10	0.044	0	57
LT,SA	C	3.40	5	1	13		N	1955	6	206		212	0.03	1949			1949	0.109			25	25	0.642	42	59
SA,RT	C	3.40	5	1	15			2095		225	2	227	0.01	2093			2093	0.109	0.109		25	25	0.642	42	59
RT	C	3.40	5	1	18			2095			210	210	1.00	1934			1934	0.109			25	25	0.642	42	59
SA	D	3.40	2	1			N	1955		413		413	0.00	1955			1955	0.211	0.211		48	48	0.642	66	42
RT	D	3.40	2	2	18		N	4050			388	388	1.00	3738			3738	0.104			23	48	0.316	30	33

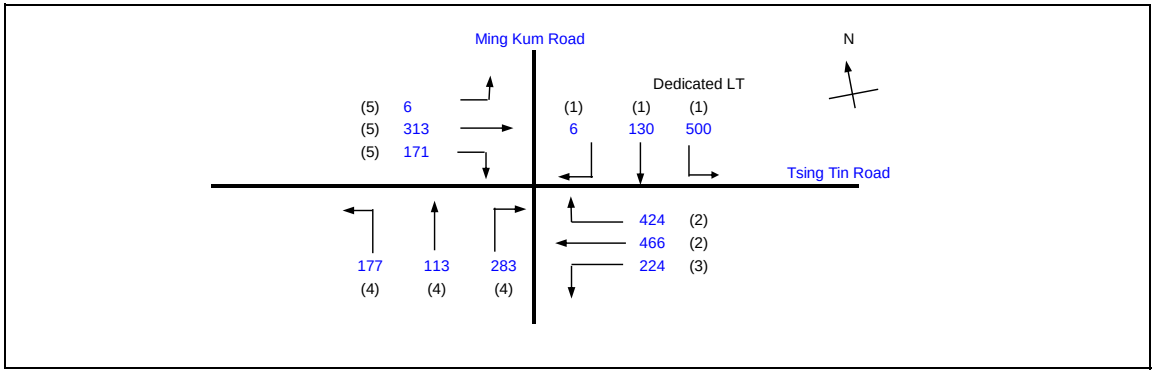
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED

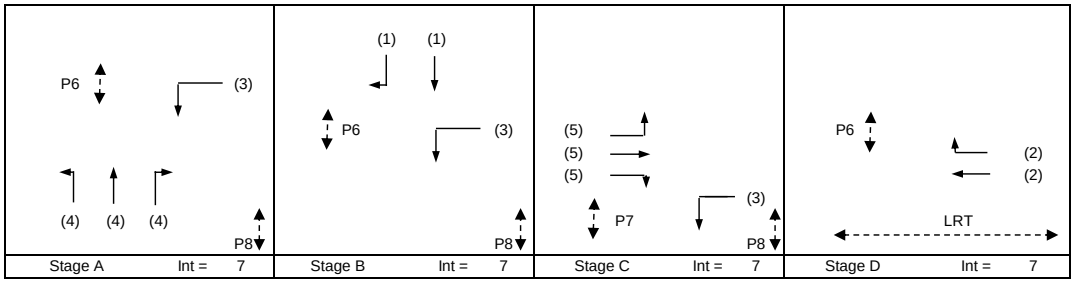
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Des**		
J9: Tsing Tin Road / Ming Kum Road			
2028 PM Design Peak Hour Traffic Flows (Weekday)			

PROJECT NO.:	81460	Prepared By:	JL Feb-21
FILENAME :		Checked By:	MM Feb-21
J9_Tsing Tin Road_Ming Kum Road_S.xls		Reviewed By:	OC Feb-21



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	145 sec
Sum(y)		Y =	0.499
Loss time		L =	24 sec
Total Flow		=	2313 pcu
Co	= (1.5*L+5)/(1-Y)	=	81.9 sec
Cm	= L/(1-Y)	=	47.9 sec
Yult		=	0.720
R.C.ult	= (Yult-Y)/Y*100%	=	44.2 %
Cp	= 0.9*L/(0.9-Y)	=	53.9 sec
Ymax	= 1-L/C	=	0.834
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	50 %

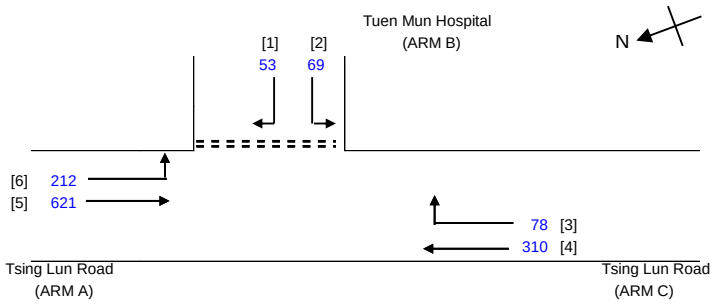


Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		107	8
P7	C	5	5	4	5	16	4
P8	A,B,C	8	5	7		56	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				24					
LT	A	3.30	4	1	12		N	1945	177			177	1.00	1729			1729	0.102			25	35	0.419	30	44
SA,RT	A	3.30	4	1	18			2085		113	191	305	0.00	2085			2085	0.146	0.146		35	35	0.598	54	48
RT	A	3.30	4	1	16			2085			92	92	3.08	1618			1618	0.057			14	35	0.233	12	41
LT	A,B,C	3.50	3	1	21		N	1965	224			224	1.00	1834			1834	0.122			30	30	0.598	42	53
SA	B	3.30	1	2			N	4030		130		130	0.00	4030			4030	0.032	0.032		8	8	0.598	15	71
RT	B	3.30	1	1	20			2085			6	6	1.00	1940			1940	0.003			1	8	0.057	0	60
LT,SA	C	3.40	5	1	13		N	1955	6	154		160	0.04	1947			1947	0.082			20	20	0.598	30	62
SA,RT	C	3.40	5	1	15			2095		159	13	172	0.07	2080			2080	0.083	0.083		20	20	0.598	30	61
RT	C	3.40	5	1	18			2095			158	158	1.00	1934			1934	0.082			20	20	0.598	30	62
SA	D	3.40	2	1			N	1955		466		466	0.00	1955			1955	0.238	0.238		58	58	0.598	66	34
RT	D	3.40	2	2	18		N	4050			424	424	1.00	3738			3738	0.113			27	58	0.284	30	27

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Ref**	PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.03	(metres)
W cr	=	0	(metres)
q a-b	=	212	(pcu/hr)
q a-c	=	621	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	12.00	(metres)
Vr c-b	=	32.5	(metres)
q c-a	=	310	(pcu/hr)
q c-b	=	77.51	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	41.1	(metres)
Vr b-a	=	36.7	(metres)
Vr b-c	=	36.7	(metres)
q b-a	=	53	(pcu/hr)
q b-c	=	69	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.0962118
E	=	1.1728455
F	=	1.6443391
Y	=	0.653965
F for (Qb-ac)	=	0.5670103

THE CAPACITY OF MOVEMENT :

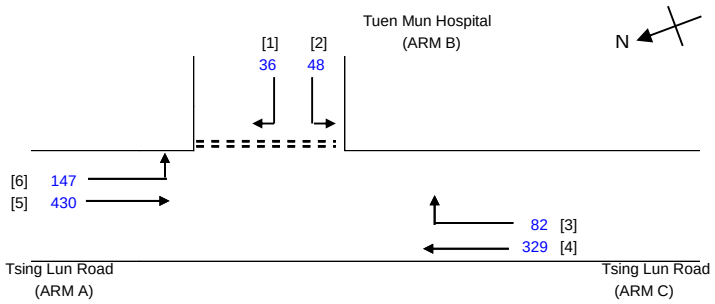
Q b-a	=	424			
Q b-c	=	677	Q b-c (O) =	656	
Q c-b	=	899			
Q b-ac	=	538			
TOTAL FLOW	=	1342.088926	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1242
DFC b-c	=	0.1019
DFC c-b	=	0.0862
DFC b-c (share lane)	=	0.2261

CRITICAL DFC = 0.23

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Ref**	PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.03	(metres)
W cr	=	0	(metres)
q a-b	=	147	(pcu/hr)
q a-c	=	430	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	12.00	(metres)
Vr c-b	=	32.5	(metres)
q c-a	=	329	(pcu/hr)
q c-b	=	82.23	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	41.1	(metres)
Vr b-a	=	36.7	(metres)
Vr b-c	=	36.7	(metres)
q b-a	=	36	(pcu/hr)
q b-c	=	48	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.0962118
E	=	1.1728455
F	=	1.6443391
Y	=	0.653965
F for (Qb-ac)	=	0.5670103

THE CAPACITY OF MOVEMENT :

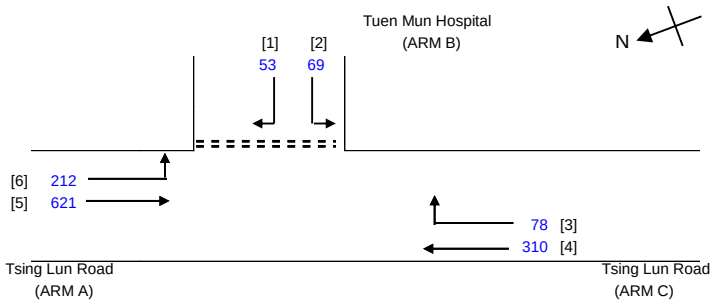
Q b-a	=	475		
Q b-c	=	738	Q b-c (O) =	723.8
Q c-b	=	999		
Q b-ac	=	595.3		
TOTAL FLOW	=	1071.608252	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0767
DFC b-c	=	0.0647
DFC c-b	=	0.0823
DFC b-c (share lane)	=	0.1414

CRITICAL DFC = 0.14

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Des**	PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.03	(metres)
W cr	=	0	(metres)
q a-b	=	212	(pcu/hr)
q a-c	=	621	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	12.00	(metres)
Vr c-b	=	32.5	(metres)
q c-a	=	310	(pcu/hr)
q c-b	=	77.51	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	41.1	(metres)
Vr b-a	=	36.7	(metres)
Vr b-c	=	36.7	(metres)
q b-a	=	53	(pcu/hr)
q b-c	=	69	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.0962118
E	=	1.1728455
F	=	1.6443391
Y	=	0.653965
F for (Qb-ac)	=	0.5670103

THE CAPACITY OF MOVEMENT :

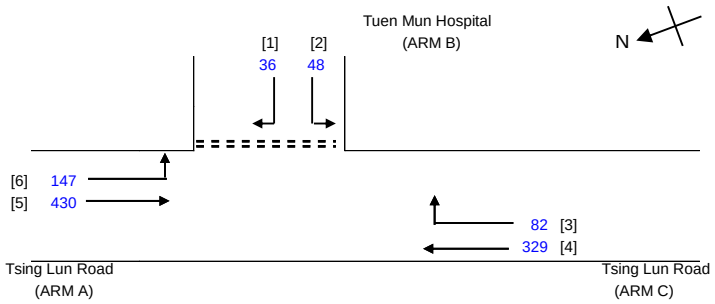
Q b-a	=	424			
Q b-c	=	677	Q b-c (O) =	656	
Q c-b	=	899			
Q b-ac	=	538			
TOTAL FLOW	=	1342.088926	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1242
DFC b-c	=	0.1019
DFC c-b	=	0.0862
DFC b-c (share lane)	=	0.2261

CRITICAL DFC = 0.23

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Des**	PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.03	(metres)
W cr	=	0	(metres)
q a-b	=	147	(pcu/hr)
q a-c	=	430	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	12.00	(metres)
Vr c-b	=	32.5	(metres)
q c-a	=	329	(pcu/hr)
q c-b	=	82.23	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	41.1	(metres)
Vr b-a	=	36.7	(metres)
Vr b-c	=	36.7	(metres)
q b-a	=	36	(pcu/hr)
q b-c	=	48	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.0962118
E	=	1.1728455
F	=	1.6443391
Y	=	0.653965
F for (Qb-ac)	=	0.5670103

THE CAPACITY OF MOVEMENT :

Q b-a	=	475		
Q b-c	=	738	Q b-c (O) =	723.8
Q c-b	=	999		
Q b-ac	=	595.3		
TOTAL FLOW	=	1071.608252	(PCU/HR)	

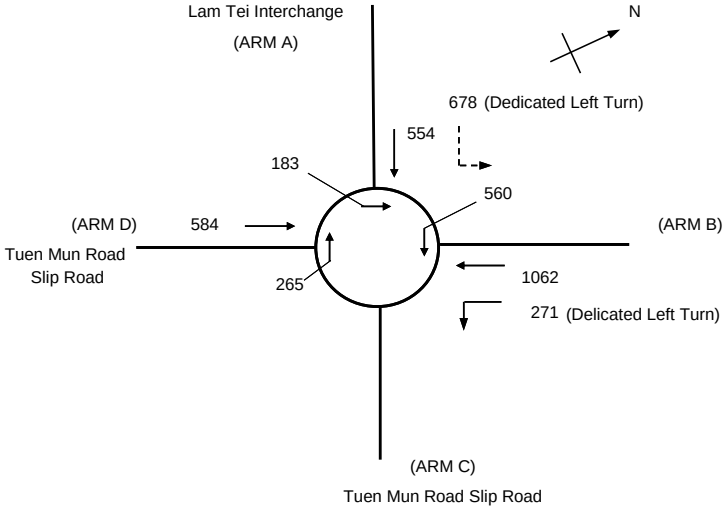
COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0767
DFC b-c	=	0.0647
DFC c-b	=	0.0823
DFC b-c (share lane)	=	0.1414

CRITICAL DFC = 0.14

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J11 : Lam Tei Interchange	**2028 AM Ref (Imp)**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	Feb-21

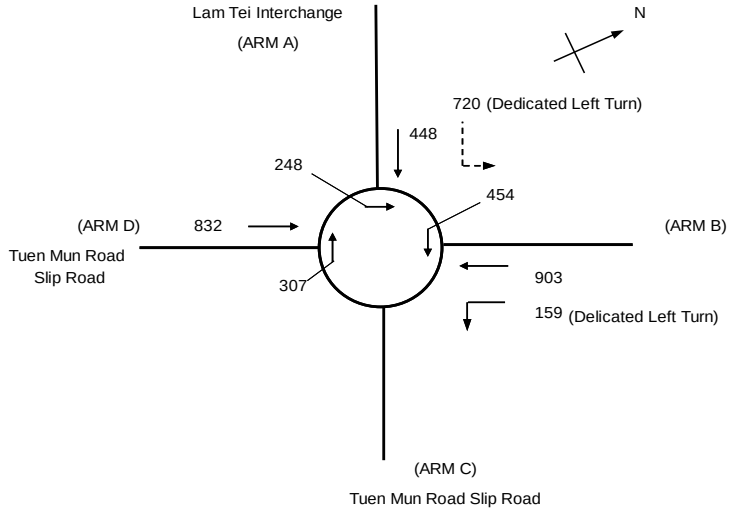
With Junction Improvement Scheme under Tuen Mun Area 54 developments (Argeement No. CE38/2011(CE) and Approved Planning Application A/TM/500)



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	6.0	7.9		3.2			
E	=	Entry width (m)	10.4	12.3		8.0			
L	=	Effective length of flare (m)	10.5	3.0		16.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	89.0	89.0		89.0			
A	=	Entry angle (degree)	30.0	29.0		32.0			
Q	=	Entry flow (pcu/h)	554	1062		584			
Qc	=	Circulating flow across entry (pcu/h)	183	560		265			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.67	2.35		0.48			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.02			
X2	=	V + ((E-V)/(1+2S))	7.88	8.67		5.65			
M	=	EXP((D-60)/10)	18	18		18			
F	=	303*X2	2388	2628		1712			
Td	=	1+(0.5/(1+M))	1.03	1.03		1.03			
Fc	=	0.21*Td(1+0.2*X2)	0.56	0.59		0.46			
Qe	=	K(F-Fc*Qc)	2362	2363		1627	Total In Sum =	2200	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.23	0.45		0.36	DFC of Critical Approach =	0.45	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J11 : Lam Tei Interchange	**2028 PM Ref (Imp)**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	Feb-21

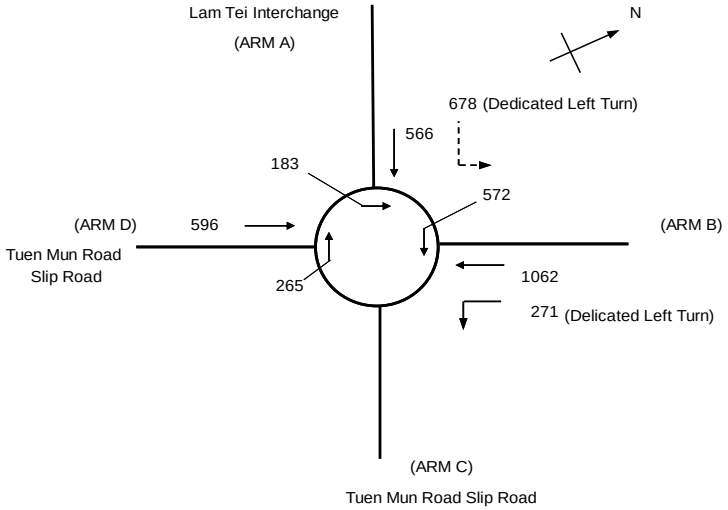
With Junction Improvement Scheme under Tuen Mun Area 54 developments (Argeement No. CE38/2011(CE) and Approved Planning Application A/TM/500)



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	6.0	7.9		3.2			
E	=	Entry width (m)	10.4	12.3		8.0			
L	=	Effective length of flare (m)	10.5	3.0		16.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	89.0	89.0		89.0			
A	=	Entry angle (degree)	30.0	29.0		32.0			
Q	=	Entry flow (pcu/h)	448	903		832			
Qc	=	Circulating flow across entry (pcu/h)	248	454		307			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.67	2.35		0.48			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.02			
X2	=	V + ((E-V)/(1+2S))	7.88	8.67		5.65			
M	=	EXP((D-60)/10)	18	18		18			
F	=	303*X2	2388	2628		1712			
Td	=	1+(0.5/(1+M))	1.03	1.03		1.03			
Fc	=	0.21*Td(1+0.2*X2)	0.56	0.59		0.46			
Qe	=	K(F-Fc*Qc)	2325	2428		1607	Total In Sum =	2183	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.19	0.37		0.52	DFC of Critical Approach =	0.52	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J11 : Lam Tei Interchange	**2028 AM Des (Imp)**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	Feb-21

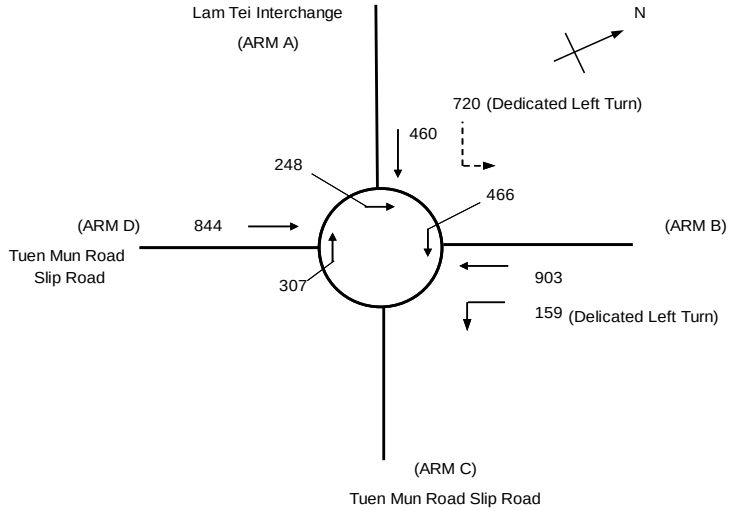
With Junction Improvement Scheme under Tuen Mun Area 54 developments (Argeement No. CE38/2011(CE) and Approved Planning Application A/TM/500)



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	6.0	7.9		3.2			
E	=	Entry width (m)	10.4	12.3		8.0			
L	=	Effective length of flare (m)	10.5	3.0		16.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	89.0	89.0		89.0			
A	=	Entry angle (degree)	30.0	29.0		32.0			
Q	=	Entry flow (pcu/h)	566	1062		596			
Qc	=	Circulating flow across entry (pcu/h)	183	572		265			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.67	2.35		0.48			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.02			
X2	=	V + ((E-V)/(1+2S))	7.88	8.67		5.65			
M	=	EXP((D-60)/10)	18	18		18			
F	=	303*X2	2388	2628		1712			
Td	=	1+(0.5/(1+M))	1.03	1.03		1.03			
Fc	=	0.21*Td(1+0.2*X2)	0.56	0.59		0.46			
Qe	=	K(F-Fc*Qc)	2362	2356		1627	Total In Sum =	2224	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.24	0.45		0.37	DFC of Critical Approach =	0.45	

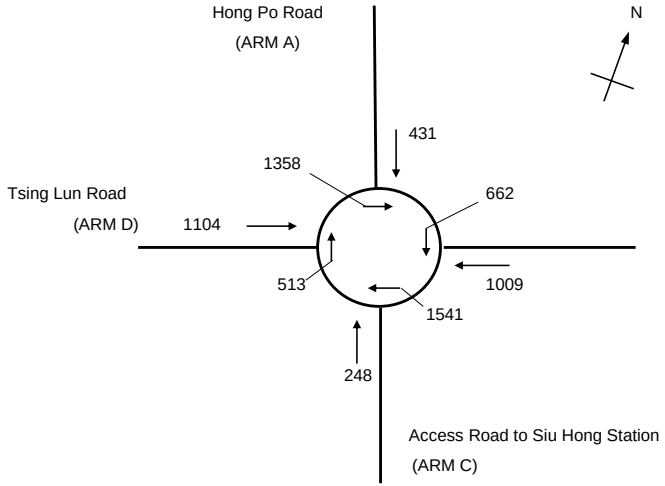
OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J11 : Lam Tei Interchange	**2028 PM Des (Imp)**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	Feb-21

With Junction Improvement Scheme under Tuen Mun Area 54 developments (Argeement No. CE38/2011(CE) and Approved Planning Application A/TM/500)



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	6.0	7.9		3.2			
E	=	Entry width (m)	10.4	12.3		8.0			
L	=	Effective length of flare (m)	10.5	3.0		16.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	89.0	89.0		89.0			
A	=	Entry angle (degree)	30.0	29.0		32.0			
Q	=	Entry flow (pcu/h)	460	903		844			
Qc	=	Circulating flow across entry (pcu/h)	248	466		307			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.67	2.35		0.48			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.02			
X2	=	V + ((E-V)/(1+2S))	7.88	8.67		5.65			
M	=	EXP((D-60)/10)	18	18		18			
F	=	303*X2	2388	2628		1712			
Td	=	1+(0.5/(1+M))	1.03	1.03		1.03			
Fc	=	0.21*Td(1+0.2*X2)	0.56	0.59		0.46			
Qe	=	K(F-Fc*Qc)	2325	2420		1607	Total In Sum =	2207	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.20	0.37		0.52	DFC of Critical Approach =	0.52	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J12 : Tsing Lun Road / Hong Po Road	**2028 AM Ref**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Reference Peak Hour Traffic Flows (Weekday)		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	Feb-21

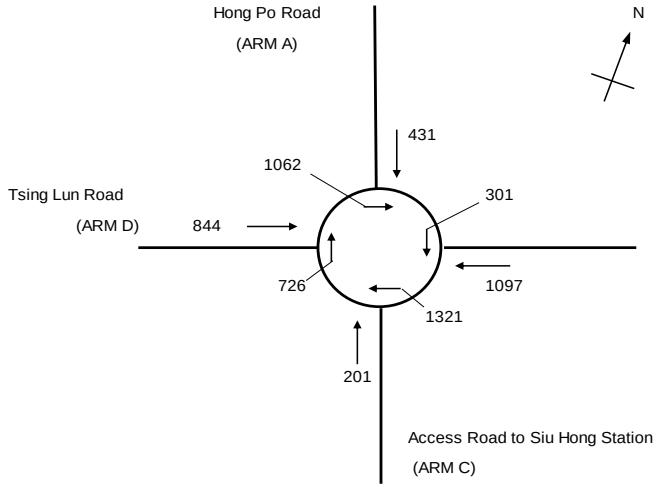


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.8	3.5	3.3	4.2
E	=	Entry width (m)	9.0	9.5	8.4	7.4
L	=	Effective length of flare (m)	7.0	10.0	8.0	25.0
R	=	Entry radius (m)	30.0	12.0	35.0	42.0
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0
Q	=	Entry flow (pcu/h)	431	1008.7	248	1104
Qc	=	Circulating flow across entry (pcu/h)	1358	661.7	1541	513
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03
X2	=	V + ((E-V)/(1+2S))	4.42	5.6	4.93	6.47
M	=	EXP((D-60)/10)	12	12.2	12	12
F	=	303*X2	1338	1683.1	1495	1960
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50
Qe	=	K(F-Fc*Qc)	753	1247.6	788	1747
DFC	=	Design flow/Capacity = Q/Qe	0.57	0.8	0.31	0.63

Total In Sum = 2791 PCU

DFC of Critical Approach = 0.81

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J12 : Tsing Lun Road / Hong Po Road	**2028 PM Ref**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Reference Peak Hour Traffic Flows (Weekday)		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	Feb-21

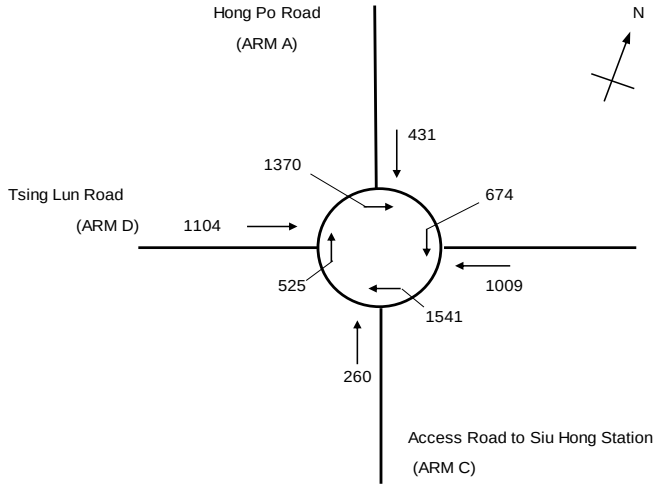


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.8	3.5	3.3	4.2
E	=	Entry width (m)	9.0	9.5	8.4	7.4
L	=	Effective length of flare (m)	7.0	10.0	8.0	25.0
R	=	Entry radius (m)	30.0	12.0	35.0	42.0
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0
Q	=	Entry flow (pcu/h)	431	1097.2	201	844
Qc	=	Circulating flow across entry (pcu/h)	1062	300.9	1321	726
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03
X2	=	V + ((E-V)/(1+2S))	4.42	5.6	4.93	6.47
M	=	EXP((D-60)/10)	12	12.2	12	12
F	=	303*X2	1338	1683.1	1495	1960
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50
Qe	=	K(F-Fc*Qc)	870	1397.8	878	1639
DFC	=	Design flow/Capacity = Q/Qe	0.49	0.8	0.23	0.51

Total In Sum = 2572 PCU

DFC of Critical Approach = 0.78

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J12 : Tsing Lun Road / Hong Po Road	**2028 AM Des**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	Feb-21

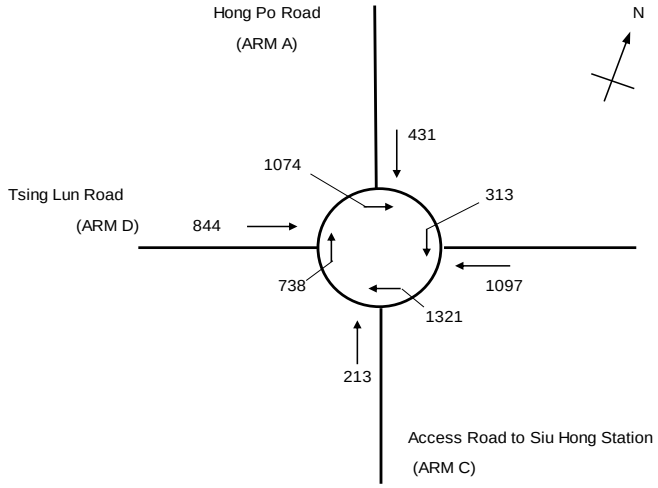


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.8	3.5	3.3	4.2
E	=	Entry width (m)	9.0	9.5	8.4	7.4
L	=	Effective length of flare (m)	7.0	10.0	8.0	25.0
R	=	Entry radius (m)	30.0	12.0	35.0	42.0
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0
Q	=	Entry flow (pcu/h)	431	1008.7	260	1104
Qc	=	Circulating flow across entry (pcu/h)	1370	673.7	1541	525
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03
X2	=	V + ((E-V)/(1+2S))	4.42	5.6	4.93	6.47
M	=	EXP((D-60)/10)	12	12.2	12	12
F	=	303*X2	1338	1683.1	1495	1960
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50
Qe	=	K(F-Fc*Qc)	748	1242.6	788	1741
DFC	=	Design flow/Capacity = Q/Qe	0.58	0.8	0.33	0.63

Total In Sum = 2803 PCU

DFC of Critical Approach = 0.81

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J12 : Tsing Lun Road / Hong Po Road	**2028 PM Des**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	Feb-21



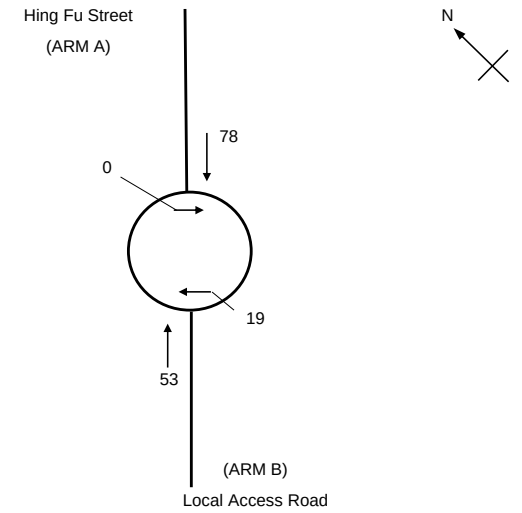
ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	2.8	3.5	3.3	4.2			
E	=	Entry width (m)	9.0	9.5	8.4	7.4			
L	=	Effective length of flare (m)	7.0	10.0	8.0	25.0			
R	=	Entry radius (m)	30.0	12.0	35.0	42.0			
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0			
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0			
Q	=	Entry flow (pcu/h)	431	1097.2	213	844			
Qc	=	Circulating flow across entry (pcu/h)	1074	312.9	1321	738			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.20			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03			
X2	=	V + ((E-V)/(1+2S))	4.42	5.6	4.93	6.47			
M	=	EXP((D-60)/10)	12	12.2	12	12			
F	=	303*X2	1338	1683.1	1495	1960			
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04			
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50			
Qe	=	K(F-Fc*Qc)	865	1392.8	878	1632	Total In Sum =	2584	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.50	0.8	0.24	0.52	DFC of Critical Approach =	0.79	

Appendix E

2028 Sensitivity Test

Junction Calculation Sheets

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J1 : Hing Fu Street Roundabout	**2028 AM Sen**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	Feb-21

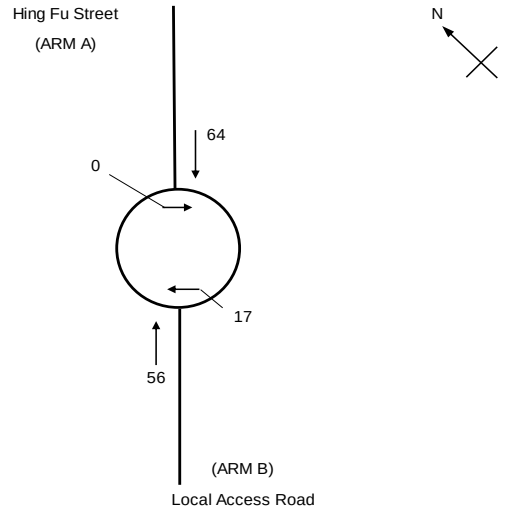


ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.5	2.2
E	=	Entry width (m)	3.4	3.5
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	35.0	58.0
Q	=	Entry flow (pcu/h)	78	53
Qc	=	Circulating flow across entry (pcu/	0	19
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	-0.21	2.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.93	0.79
X2	=	V + ((E-V)/(1+2S))	3.28	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	993	728
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.52	0.47
Qe	=	K(F-Fc*Qc)	927	567
DFC	=	Design flow/Capacity = Q/Qe	0.08	0.09

Total In Sum = 132 PCU

DFC of Critical Approach = 0.09

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J1 : Hing Fu Street Roundabout	**2028 PM Sen**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J1_Hing Fu Street_R.xls	REVIEWED BY:	OC	Feb-21



ARM			A	B
INPUT PARAMETERS:				
V	=	Approach half width (m)	3.5	2.2
E	=	Entry width (m)	3.4	3.5
L	=	Effective length of flare (m)	1.0	1.0
R	=	Entry radius (m)	10.0	6.0
D	=	Inscribed circle diameter (m)	12.0	12.0
A	=	Entry angle (degree)	35.0	58.0
Q	=	Entry flow (pcu/h)	64	56
Qc	=	Circulating flow across entry (pcu/	0	17
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = 1.6(E-V)/L	-0.21	2.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.93	0.79
X2	=	V + ((E-V)/(1+2S))	3.28	2.40
M	=	EXP((D-60)/10)	0	0
F	=	303*X2	993	728
Td	=	1+(0.5/(1+M))	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)	0.52	0.47
Qe	=	K(F-Fc*Qc)	927	568
DFC	=	Design flow/Capacity = Q/Qe	0.07	0.10

Total In Sum = 120 PCU

DFC of Critical Approach = 0.10

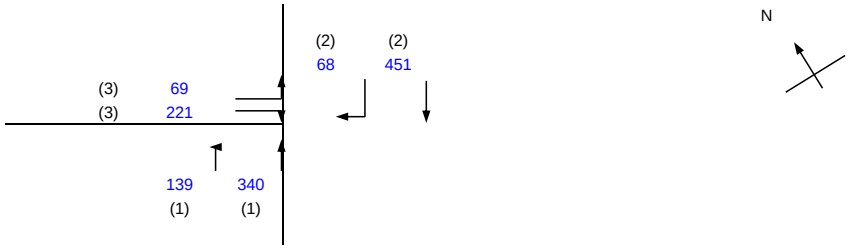
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

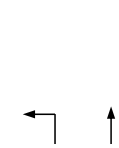
			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO.	Prepared By:	JL	Feb-21
J2: Tong Hang Road / Hing Kwai Street / Hing Fu Street	FILENAME :	Checked By:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)	J2_Hing Fu Street_Hing Kwai Street_P.xls	Reviewed By:	OC	Feb-21

2028 AM Sen

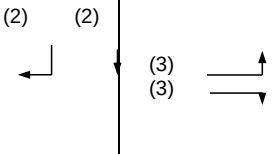
With Junction Improvement under Tuen Mun Area 54 developments (Agreement No. CE38/2011(CE))



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.363	
Loss time		L =	39	sec
Total Flow		=	1287	pcu
Co	= (1.5*L+5)/(1-Y)	=	99.6	sec
Cm	= L/(1-Y)	=	61.2	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	67.6	%
Cp	= 0.9*L/(0.9-Y)	=	65.3	sec
Ymax	= 1-L/C	=	0.639	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	58.6	%

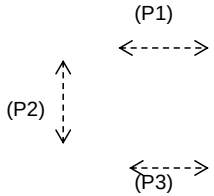


Stage A Int = 6



Stage B Int = 6

Stage C Int = 6



Stage D Int = 6

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.0	5	6		8	10
P2	D	7.0	5	6		8	10
P3	D	7.0	5	6		8	10

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				21					
LT, SA	A	3.50	1	1	15		N	1965	139	85		224	0.62	1850			1850	0.121	0.121		23	23	0.567	30	40
SA	A	3.50	1	1				2105		254		254	0.00	2105			2105	0.121			23	23	0.567	36	39
SA	B	3.50	2	1			N	1965		253		253	0.00	1965			1965	0.129	0.129		24	24	0.567	30	38
RT, SA	B	3.50	2	1	20			2105		198	68	266	0.25	2066			2066	0.129			24	24	0.567	36	38
LT	C	3.50	3	1	10		N	1965		69		69	0.00	1965			1965	0.035	0.113		7	21	0.176	6	33
RT	C	3.50	3	1	20			2105			221	221	1.00	1958			1958	0.113			21	21	0.567	30	41
Ped	D																			18		18			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

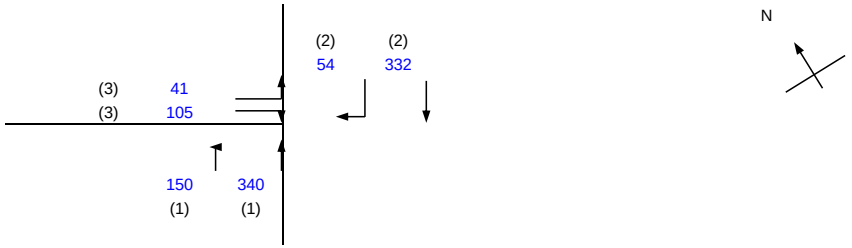
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

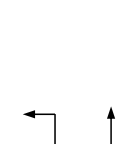
			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO.	Prepared By:	JL	Feb-21
J2: Tong Hang Road / Hing Kwai Street / Hing Fu Street	FILENAME :	Checked By:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)	J2_Hing Fu Street_Hing Kwai Street_P.xls	Reviewed By:	OC	Feb-21

2028 PM Sen

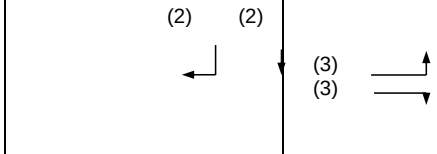
With Junction Improvement under Tuen Mun Area 54 developments (Agreement No. CE38/2011(CE))



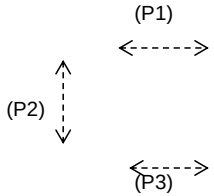
			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.274	
Loss time		L =	39	sec
Total Flow		=	1023	pcu
Co	= (1.5*L+5)/(1-Y)	=	87.4	sec
Cm	= L/(1-Y)	=	53.7	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	121.9	%
Cp	= 0.9*L/(0.9-Y)	=	56.0	sec
Ymax	= 1-L/C	=	0.639	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	110.1	%



Stage A Int = 6



Stage B Int = 6 | Stage C Int = 6



Stage D Int = 6

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.0	5	6		8	10
P2	D	7.0	5	6		8	10
P3	D	7.0	5	6		8	10

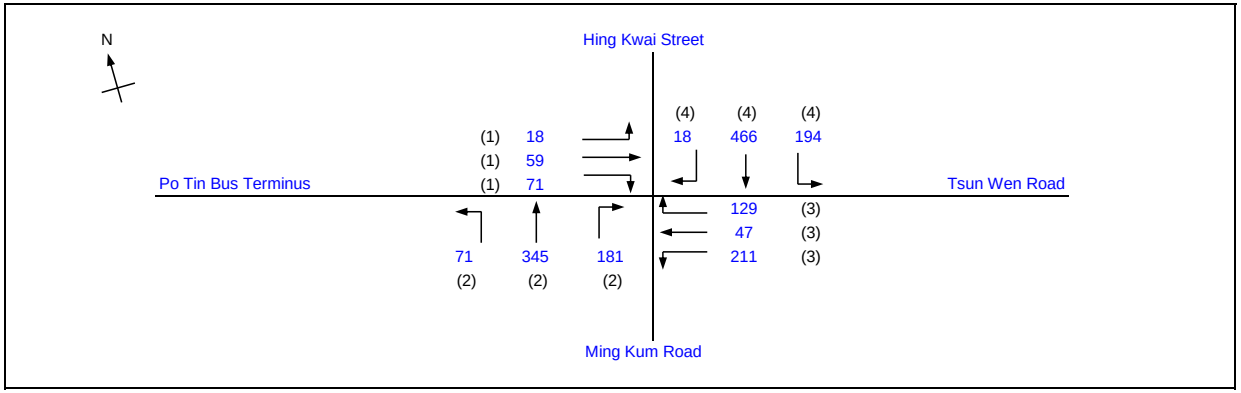
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				21					
LT, SA	A	3.50	1	1	15		N	1965	150	79		229	0.66	1844			1844	0.124	0.124		31	31	0.428	24	30
SA	A	3.50	1	1				2105		262		262	0.00	2105			2105	0.124			31	31	0.428	30	30
SA	B	3.50	2	1			N	1965		188		188	0.00	1965			1965	0.096	0.096		24	24	0.428	24	35
RT, SA	B	3.50	2	1	20			2105		144	54	198	0.27	2063			2063	0.096			24	24	0.428	24	35
LT	C	3.50	3	1	10		N	1965		41		41	0.00	1965			1965	0.021	0.054		5	14	0.166	6	39
RT	C	3.50	3	1	20			2105			105	105	1.00	1958			1958	0.054			14	14	0.428	12	44
Ped	D																			18		18			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

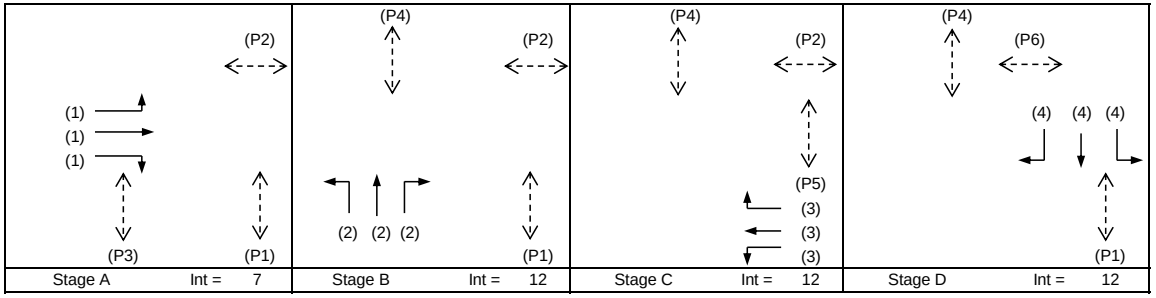
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	**2028 AM Sen**	Checked By:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.424	
Loss time		L =	39	sec
Total Flow		=	1809	pcu
Co	= (1.5*L+5)/(1-Y)	=	110.2	sec
Cm	= L/(1-Y)	=	67.7	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	43.3	%
Cp	= 0.9*L/(0.9-Y)	=	73.7	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	43.3	%



	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		79	8
P2	A,B,C	7.2	5	6		77	6
P3	A	10.0	5	8		18	8
P4	B,C,D	12.3	5	10		70	10
P5	C	8.5	5	7		13	8
P6	D	8.6	5	7		25	7

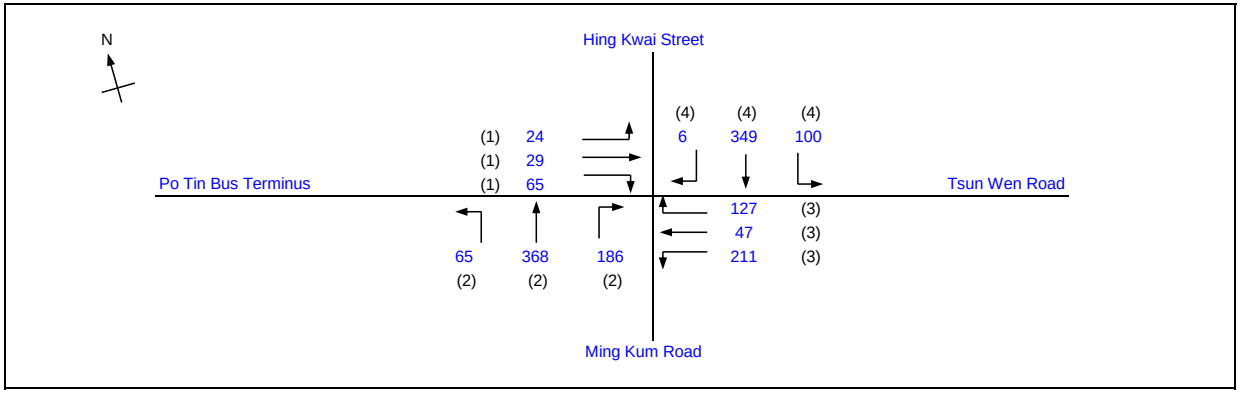
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	18			18	1.00	1870			1870	0.01			2	2	0.628	6	150
RT,SA	A	4.60	1	1	24			2215		59	71	130	0.55	2142			2142	0.06	0.06		12	12	0.628	24	60
LT,SA	B	3.40	2	1	11		N	1955	71	120		191	0.37	1861			1861	0.10			20	20	0.628	30	51
SA	B	3.50	2	1				2105		225		225	0.00	2105			2105	0.11			20	20	0.628	36	49
RT	B	3.50	2	1	26			2105			181	181	1.00	1990			1990	0.09	0.11		17	17	0.628	30	53
LT	C	3.30	3	1	17		N	1945	121			121	1.00	1787			1787	0.07			13	13	0.628	18	60
SA,LT	C	3.40	3	1	20			2095	90	47		137	0.66	1997			1997	0.07	0.07		13	13	0.628	24	59
RT	C	3.40	3	1	25			2095			129	129	1.00	1976			1976	0.07			13	13	0.628	24	60
LT,SA	D	3.70	4	1	16		N	1985	194	86		280	0.69	1864			1864	0.15			29	29	0.628	42	43
RT,SA	D	3.70	4	1	20			2125		380	18	398	0.04	2118			2118	0.19	0.19		36	36	0.628	54	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

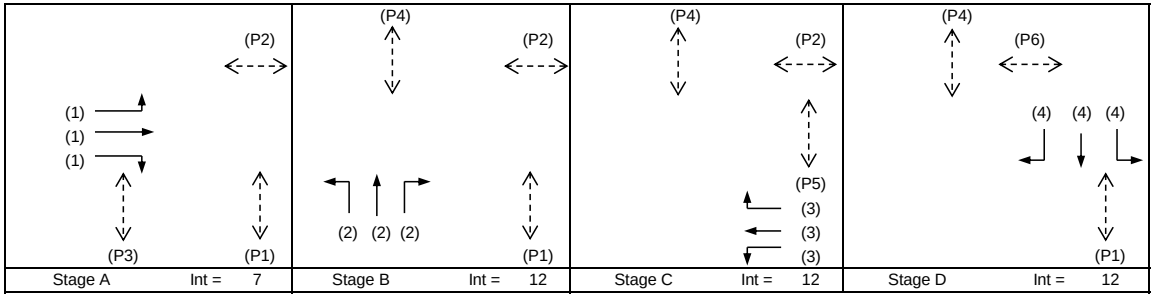
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J3: Tsun Wen Road / Ming Kum Road / Hing Kuai Street / Po Tin Bus Terminal	**2028 PM Sen**	Checked By:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J3_Tsun Wen Rd_ Ming Kum Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.339	
Loss time		L =	39	sec
Total Flow		=	1577	pcu
Co	= (1.5*L+5)/(1-Y)	=	96.1	sec
Cm	= L/(1-Y)	=	59.0	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	79.2	%
Cp	= 0.9*L/(0.9-Y)	=	62.6	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	79.2	%

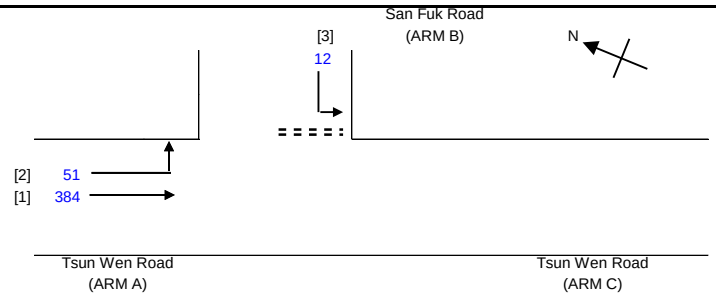


	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,D	10.1	5	8		79	8
P2	A,B,C	7.2	5	6		77	6
P3	A	10.0	5	8		18	8
P4	B,C,D	12.3	5	10		70	10
P5	C	8.5	5	7		13	8
P6	D	8.6	5	7		25	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				39					
LT	A	4.30	1	1	16		N	2045	24			24	1.00	1870			1870	0.01			3	3	0.502	0	87
RT,SA	A	4.60	1	1	24			2215		29	65	94	0.69	2124			2124	0.04	0.04		11	11	0.502	12	56
LT,SA	B	3.40	2	1	11		N	1955	65	135		200	0.32	1872			1872	0.11			26	26	0.502	30	42
SA	B	3.50	2	1				2105		233		233	0.00	2105			2105	0.11			26	26	0.502	36	40
RT	B	3.50	2	1	26			2105			186	186	1.00	1990			1990	0.09	0.11		22	22	0.502	30	44
LT	C	3.30	3	1	17		N	1945	121			121	1.00	1787			1787	0.07			16	16	0.502	18	50
SA,LT	C	3.40	3	1	20			2095	90	47		137	0.66	1997			1997	0.07	0.07		16	16	0.502	18	49
RT	C	3.40	3	1	25			2095			127	127	1.00	1976			1976	0.06			15	15	0.502	18	50
LT,SA	D	3.70	4	1	16		N	1985	100	119		219	0.46	1903			1903	0.12			27	27	0.502	30	40
RT,SA	D	3.70	4	1	20			2125		230	6	236	0.03	2121			2121	0.11	0.12		27	27	0.502	36	40

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J4 : Tsun Wen Road / San Fuk Road	**2028 AM Sen**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.50	(metres)
W cr	=	0	(metres)
q a-b	=	51	(pcu/hr)
q a-c	=	384	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.95	(metres)
Vl b-a	=	49	(metres)
Vr b-a	=	38	(metres)
Vr b-c	=	38	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	12	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5715505
E	=	1.0397299
F	=	0.5859548
Y	=	0.74125

THE CAPACITY OF MOVEMENT :

Q b-a	=	296			
Q b-c	=	661	Q b-c (O) =	661	
Q c-b	=	368			

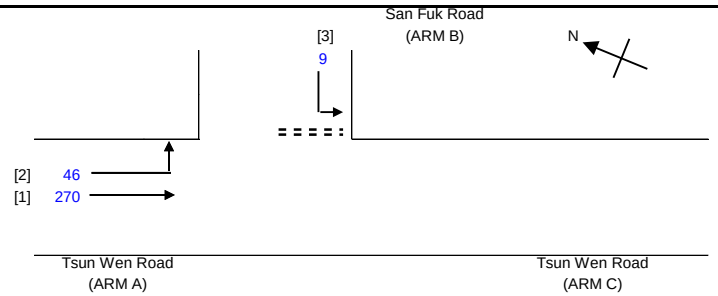
TOTAL FLOW = 446.1273282 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0178
DFC c-b	=	0.0000

CRITICAL DFC = 0.02

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J4 : Tsun Wen Road / San Fuk Road	**2028 PM Sen**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J4_Tsun Wen Rd_San Fuk Rd_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.50	(metres)
W cr	=	0	(metres)
q a-b	=	46	(pcu/hr)
q a-c	=	270	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=		(metres)
W b-c	=	4.95	(metres)
Vl b-a	=	49	(metres)
Vr b-a	=	38	(metres)
Vr b-c	=	38	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	9	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.5715505
E	=	1.0397299
F	=	0.5859548
Y	=	0.74125

THE CAPACITY OF MOVEMENT :

Q b-a	=	314			
Q b-c	=	694	Q b-c (O) =	694	
Q c-b	=	387			

TOTAL FLOW = 324.9912672 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

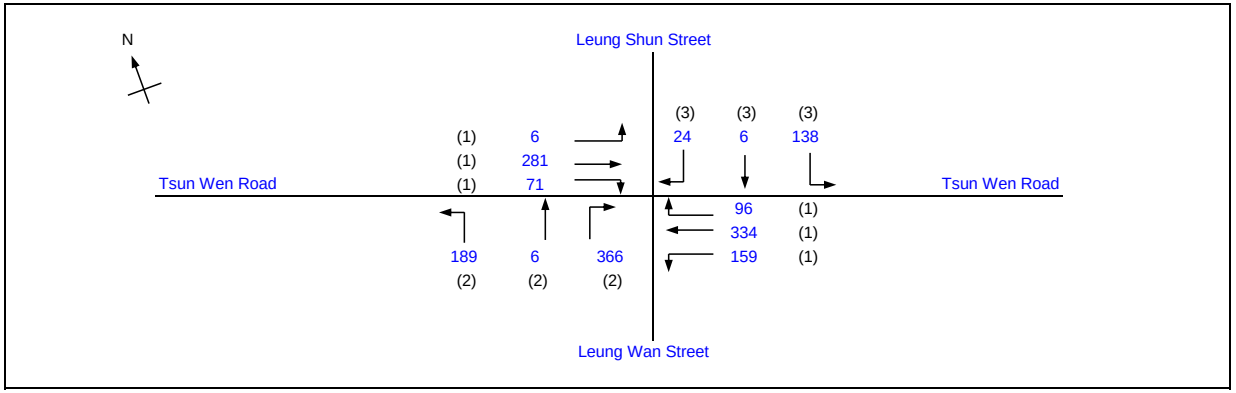
DFC b-a	=	0.0000
DFC b-c	=	0.0136
DFC c-b	=	0.0000

CRITICAL DFC = 0.01

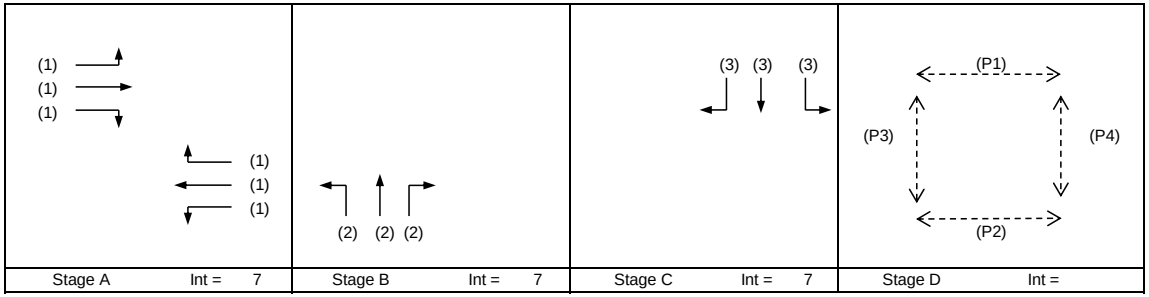
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	FILENAME :	Checked By:	MM	Feb-21
2028 AM Design Hour Traffic Flows (Weekday)	**2028 AM Sen** J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.491	
Loss time		L =	43	sec
Total Flow		=	1675	pcu
Co	= (1.5*L+5)/(1-Y)	=	136.7	sec
Cm	= L/(1-Y)	=	84.6	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	17.5	%
Cp	= 0.9*L/(0.9-Y)	=	94.7	sec
Ymax	= 1-L/C	=	0.642	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	17.5	%



Stage A Int = 7 | Stage B Int = 7 | Stage C Int = 7 | Stage D Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	132		138	0.04	1933			1933	0.071			11	20	0.429	18	44
SA	A	3.30	1	1				2085		149		149	0.00	2085			2085	0.071			11	20	0.429	24	44
RT	A	3.30	1	1	30	O		2085			71	71	1.00	1767	12	60	1827	0.039			6	20	0.233	6	41
LT,SA	A	3.50	1	1	10		N	1965	159	67		226	0.70	1777			1777	0.127			20	20	0.766	36	61
SA	A	3.40	1	1				2095		267		267	0.00	2095			2095	0.127	0.127		20	20	0.766	48	58
RT	A	3.40	1	1	30	O		2095			96	96	1.00	1776	12	60	1836	0.052			8	20	0.315	12	42
LT,SA,RT	B	5.50	2	1	25		N	2165	189	6	366	560	0.99	2044			2044	0.274	0.274		43	43	0.766	66	38
LT,SA,RT	C	3.60	3	1	25		N	1975	138	6	24	168	0.96	1867			1867	0.090	0.090		14	14	0.766	30	70
PED	D																			25		25			

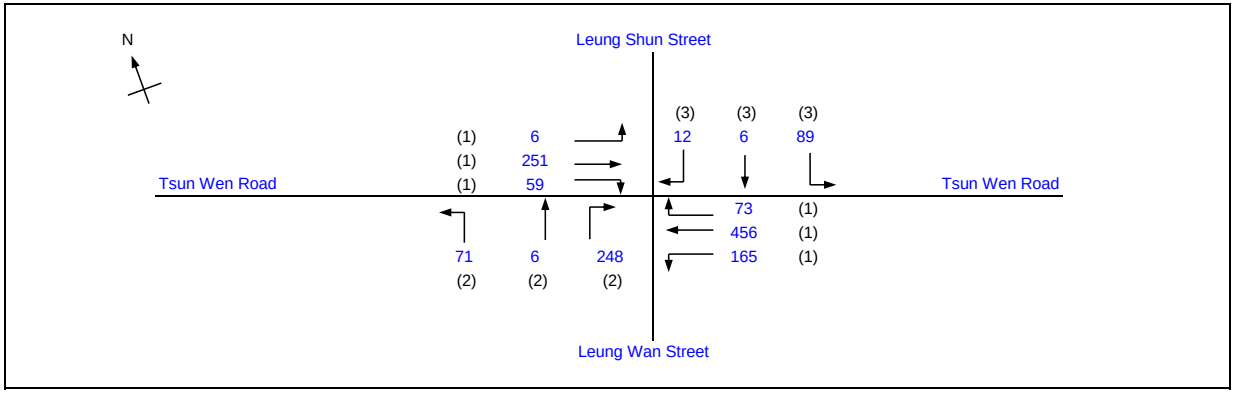
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED

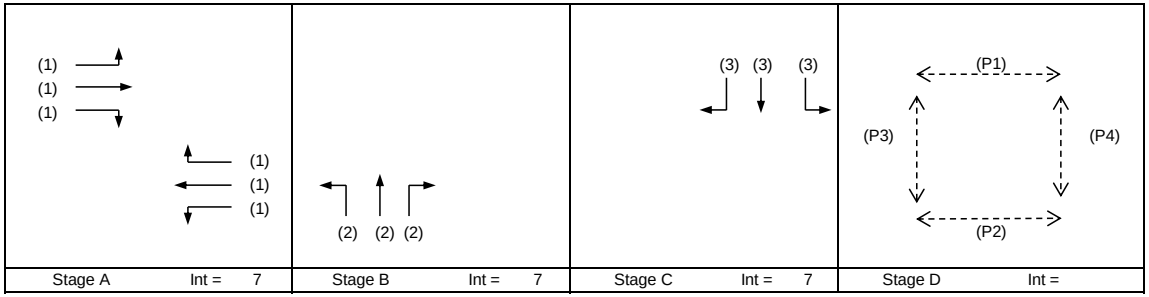
TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	FILENAME :	Checked By:	MM	Feb-21
2028 PM Design Hour Traffic Flows (Weekday)	J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21

2028 PM Sen



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.375	
Loss time		L =	43	sec
Total Flow		=	1441	pcu
Co	= (1.5*L+5)/(1-Y)	=	111.2	sec
Cm	= L/(1-Y)	=	68.8	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	54.0	%
Cp	= 0.9*L/(0.9-Y)	=	73.7	sec
Ymax	= 1-L/C	=	0.642	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	54.0	%



Stage A	Int = 7	Stage B	Int = 7	Stage C	Int = 7	Stage D	Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

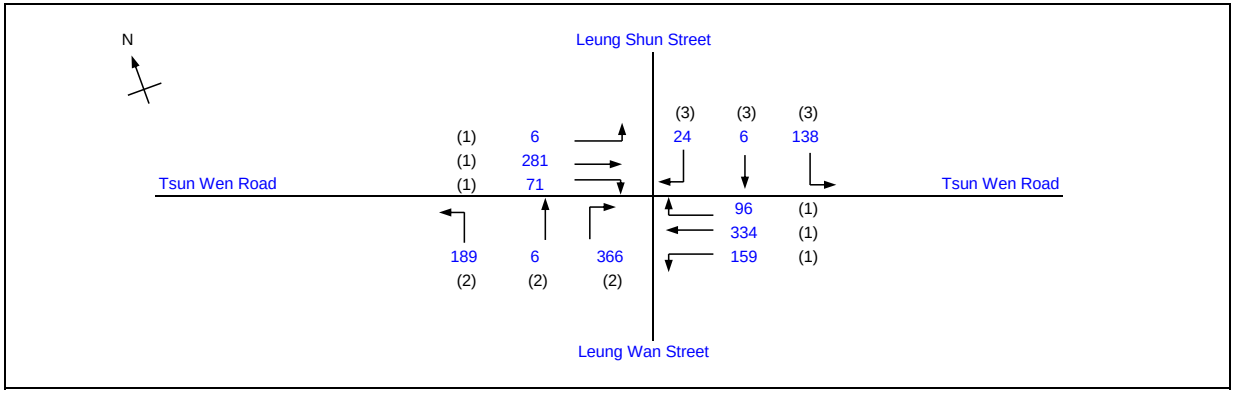
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	117		123	0.05	1931			1931	0.064			13	33	0.235	12	32
SA	A	3.30	1	1				2085		133		133	0.00	2085			2085	0.064			13	33	0.235	18	31
RT	A	3.30	1	1	30	O		2085			59	59	1.00	1767	12	60	1827	0.032			7	33	0.119	6	30
LT,SA	A	3.50	1	1	10		N	1965	165	123		288	0.57	1809			1809	0.159			33	33	0.584	36	39
SA	A	3.40	1	1				2095		333		333	0.00	2095			2095	0.159	0.159		33	33	0.584	48	38
RT	A	3.40	1	1	30	O		2095			73	73	1.00	1776	12	60	1836	0.040			8	33	0.147	6	30
LT,SA,RT	B	5.50	2	1	25		N	2165	71	6	248	324	0.98	2045			2045	0.159	0.159		33	33	0.584	42	38
LT,SA,RT	C	3.60	3	1	25		N	1975	89	6	12	107	0.94	1869			1869	0.057	0.057		12	12	0.584	18	59
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

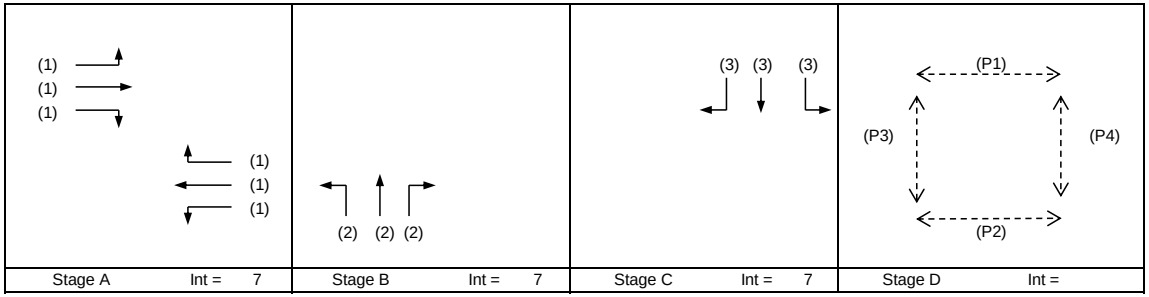
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	**2028 AM Sen (Cycle 125s)**	Checked By:	MM	Feb-21
2028 AM Design Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	125	sec
Sum(y)		Y =	0.491	
Loss time		L =	43	sec
Total Flow		=	1675	pcu
Co	= (1.5*L+5)/(1-Y)	=	136.7	sec
Cm	= L/(1-Y)	=	84.6	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	17.5	%
Cp	= 0.9*L/(0.9-Y)	=	94.7	sec
Ymax	= 1-L/C	=	0.656	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	20.1	%



Stage A	Int = 7	Stage B	Int = 7	Stage C	Int = 7	Stage D	Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

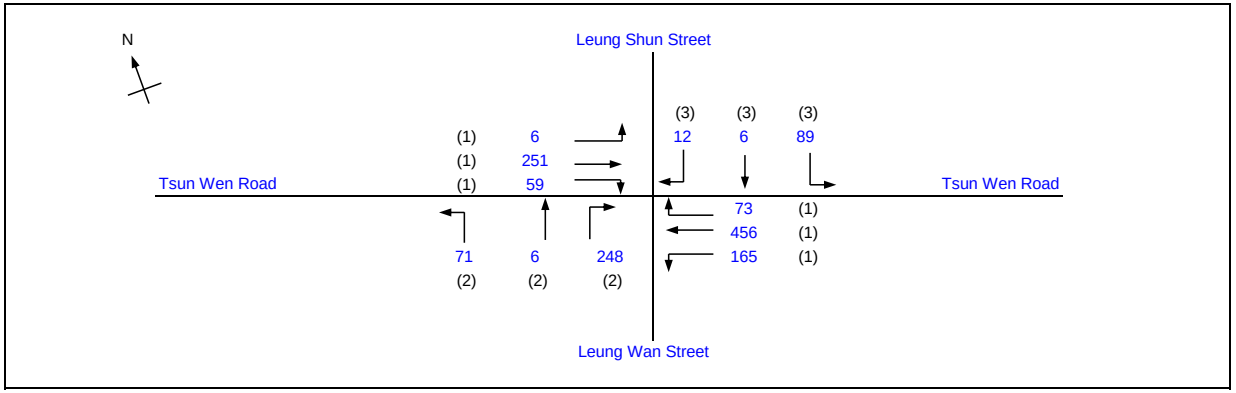
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	132		138	0.04	1933			1933	0.071			12	21	0.420	18	45
SA	A	3.30	1	1				2085		149		149	0.00	2085			2085	0.071			12	21	0.420	24	45
RT	A	3.30	1	1	30	O		2085			71	71	1.00	1767	12	58	1824	0.039			6	21	0.228	12	42
LT,SA	A	3.50	1	1	10		N	1965	159	67		226	0.70	1777			1777	0.127			21	21	0.749	42	60
SA	A	3.40	1	1				2095		267		267	0.00	2095			2095	0.127	0.127		21	21	0.749	48	58
RT	A	3.40	1	1	30	O		2095			96	96	1.00	1776	12	58	1834	0.052			9	21	0.308	12	43
LT,SA,RT	B	5.50	2	1	25		N	2165	189	6	366	560	0.99	2044			2044	0.274	0.274		46	46	0.749	72	38
LT,SA,RT	C	3.60	3	1	25		N	1975	138	6	24	168	0.96	1867			1867	0.090	0.090		15	15	0.749	30	69
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

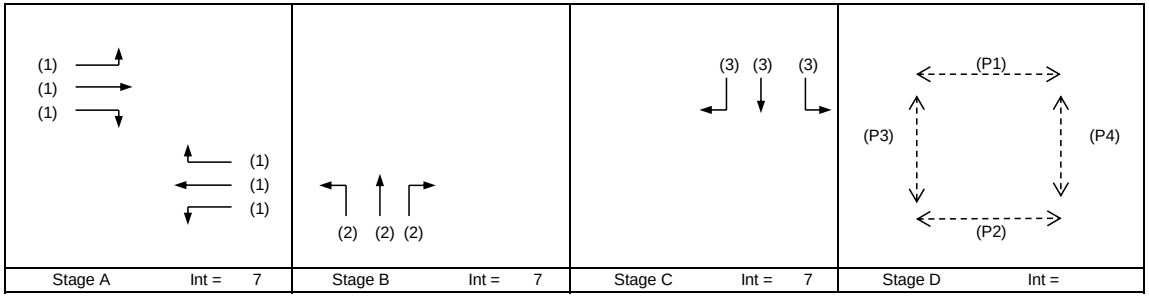
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J5: Tsun Wen Road / Leung Wan Street	**2028 PM Sen (Cycle 125s)**	Checked By:	MM	Feb-21
2028 PM Design Hour Traffic Flows (Weekday)	FILENAME : J5_Tsun Wen Rd_Leung Wan Street_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	125	sec
Sum(y)		Y =	0.375	
Loss time		L =	43	sec
Total Flow		=	1441	pcu
Co	= (1.5*L+5)/(1-Y)	=	111.2	sec
Cm	= L/(1-Y)	=	68.8	sec
Yult		=	0.578	
R.C.ult	= (Yult-Y)/Y*100%	=	54.0	%
Cp	= 0.9*L/(0.9-Y)	=	73.7	sec
Ymax	= 1-L/C	=	0.656	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	57.4	%



Stage A	Int = 7	Stage B	Int = 7	Stage C	Int = 7	Stage D	Int =

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	D	7.2	5	6		19	6
P2	D	18.0	5	15		10	15
P3	D	19.5	5	16		9	16
P4	D	21.4	5	18		7	18

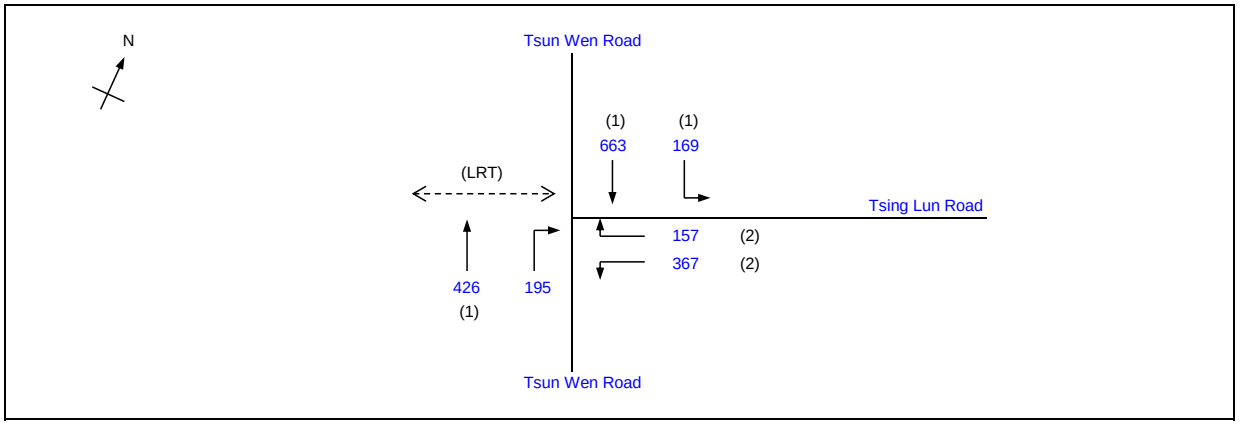
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				18					
LT,SA	A	3.30	1	1	10		N	1945	6	117		123	0.05	1931			1931	0.064			14	35	0.230	18	32
SA	A	3.30	1	1				2085		133		133	0.00	2085			2085	0.064			14	35	0.230	18	32
RT	A	3.30	1	1	30	O		2085			59	59	1.00	1767	12	58	1824	0.032			7	35	0.116	6	31
LT,SA	A	3.50	1	1	10		N	1965	165	123		288	0.57	1809			1809	0.159			35	35	0.572	42	39
SA	A	3.40	1	1				2095		333		333	0.00	2095			2095	0.159	0.159		35	35	0.572	48	39
RT	A	3.40	1	1	30	O		2095			73	73	1.00	1776	12	58	1834	0.040			9	35	0.144	6	31
LT,SA,RT	B	5.50	2	1	25		N	2165	71	6	248	324	0.98	2045			2045	0.159	0.159		35	35	0.572	48	39
LT,SA,RT	C	3.60	3	1	25		N	1975	89	6	12	107	0.94	1869			1869	0.057	0.057		13	13	0.572	18	60
PED	D																			25		25			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

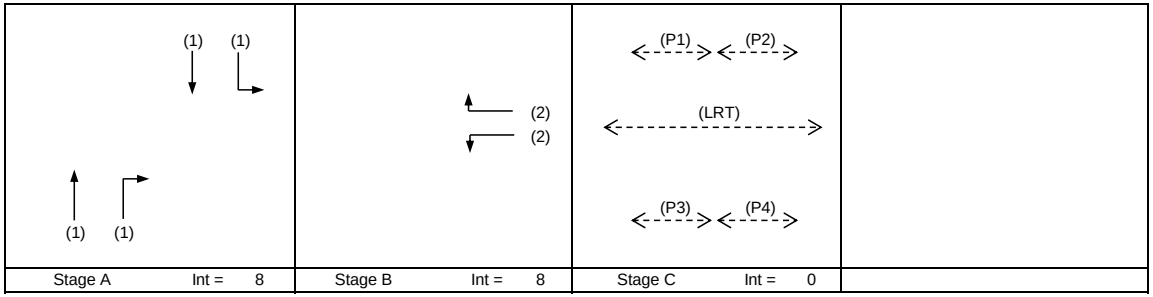
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J6: Tsing Lun Road / Tsun Wen Road	**2028 AM Sen**	Checked By:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	72	sec
Sum(y)		Y =	0.361	
Loss time		L =	36	sec
Total Flow		=	1977	pcu
Co	= (1.5*L+5)/(1-Y)	=	92.4	sec
Cm	= L/(1-Y)	=	56.4	sec
Yult		=	0.630	
R.C.ult	= (Yult-Y)/Y*100%	=	74.3	%
Cp	= 0.9*L/(0.9-Y)	=	60.2	sec
Ymax	= 1-L/C	=	0.500	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	24.5	%



Stage A	Int = 8	Stage B	Int = 8	Stage C	Int = 0

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

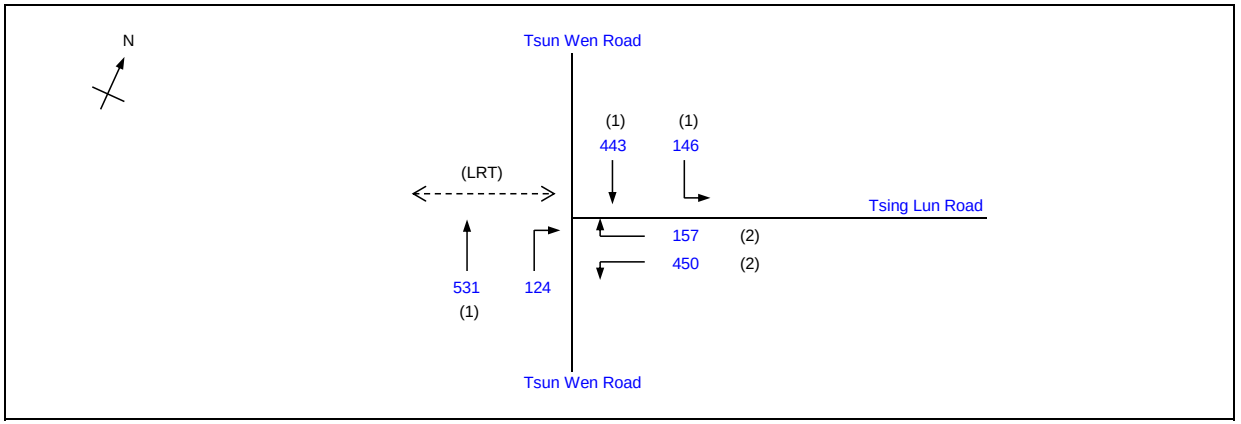
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		426		426	0.00	4030			4030	0.106			11	16	0.481	18	24
RT	A	3.50	1	1	10	O		2105			195	195	1.00	1630	12	100	1730	0.112	0.159		11	16	0.512	18	27
LT	A	3.30	1	1	10		N	1945	169			169	1.00	1691			1691	0.100			10	16	0.455	12	26
SA	A	3.30	1	2	10			4170		663		663	0.00	4170			4170	0.159			16	16	0.723	30	28
LT	B	3.30	2	1	10			2085	367			367	1.00	1813			1813	0.202	0.202		20	20	0.723	30	29
RT	B	3.50	2	1	10			2105			157	157	1.00	1830			1830	0.086			9	20	0.307	12	20
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

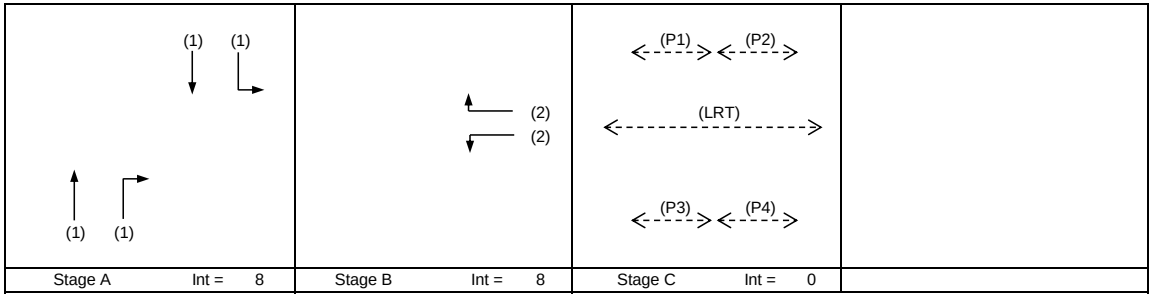
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J6: Tsing Lun Road / Tsun Wen Road	**2028 PM Sen**	Checked By:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J6_Tsun Wen Rd_Tsing Lun Rd_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	72	sec
Sum(y)		Y =	0.380	
Loss time		L =	36	sec
Total Flow		=	1851	pcu
Co	= (1.5*L+5)/(1-Y)	=	95.1	sec
Cm	= L/(1-Y)	=	58.0	sec
Yult		=	0.630	
R.C.ult	= (Yult-Y)/Y*100%	=	65.9	%
Cp	= 0.9*L/(0.9-Y)	=	62.3	sec
Ymax	= 1-L/C	=	0.500	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	18.5	%



Stage A	Int = 8	Stage B	Int = 8	Stage C	Int = 0

Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	C	7.4	5	6		16	6
P2	C	9.9	5	8		14	8
P3	C	9.7	6	8		14	8
P4	C	7.3	7	6		16	6

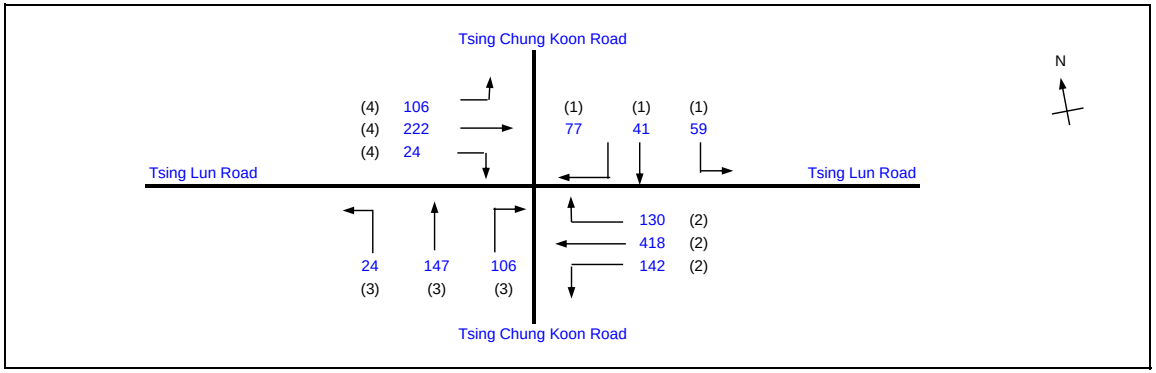
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
SA	A	3.30	1	2	10		N	4030		531		531	0.00	4030			4030	0.132	0.132		12	12	0.759	27	33
RT	A	3.50	1	1	10	O		2105			124	124	1.00	1630	12	100	1730	0.072			7	12	0.413	12	28
LT	A	3.30	1	1	10		N	1945	146			146	1.00	1691			1691	0.086			8	12	0.496	12	30
SA	A	3.30	1	2	10			4170		443		443	0.00	4170			4170	0.106			10	12	0.612	21	28
LT	B	3.30	2	1	10			2085	450			450	1.00	1813			1813	0.248	0.248		24	24	0.759	36	28
RT	B	3.50	2	1	10			2105			157	157	1.00	1830			1830	0.086			8	24	0.264	12	17
PED/LRT	C																			22		22			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

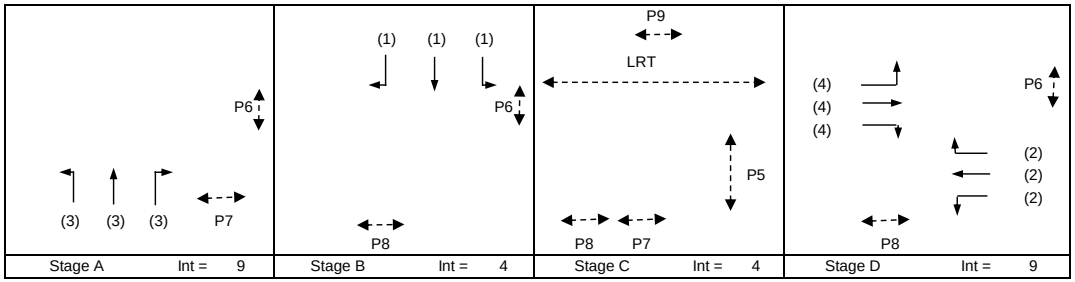
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Sen**		
J7: Tsing Lun Road / Tsing Chung Koon Road	PROJECT NO.: 81460	Prepared By:	JL Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Checked By:	MM Feb-21
		Reviewed By:	OC Feb-21



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	101 sec
Sum(y)		Y =	0.480
Loss time		L =	39 sec
Total Flow		=	1496 pcu
Co	= (1.5*L+5)/(1-Y)	=	122.1 sec
Cm	= L/(1-Y)	=	75.0 sec
Yult		=	0.608
R.C.ult	= (Yult-Y)/Y*100%	=	26.6 %
Cp	= 0.9*L/(0.9-Y)	=	83.6 sec
Ymax	= 1-L/C	=	0.614
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	15.1 %



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	42	3
P7	A,C	5.5	5	5	6	24	5
P8	B,C,D	7.0	5	6	1	33	6
P9	C	7.5	5	6	1	11	6

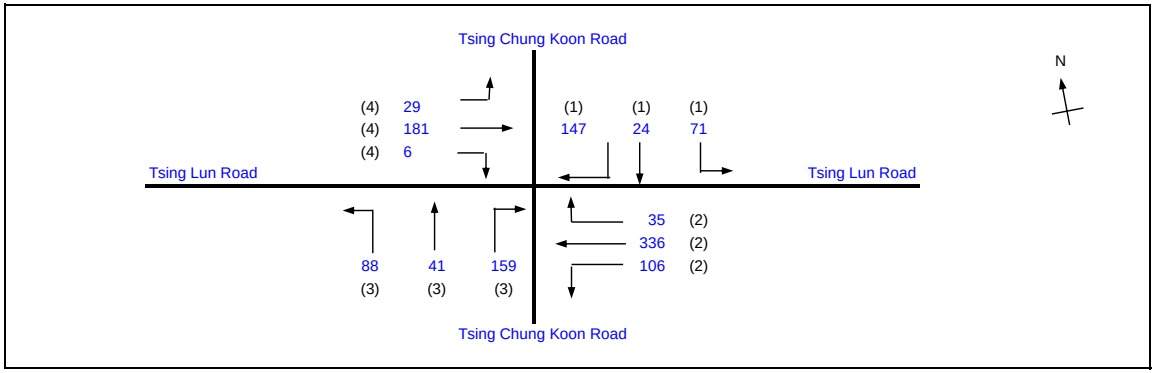
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	24	147		171	0.14	1972			1972	0.087	0.087		11	11	0.782	30	66
RT	A	3.70	3	1	18			2125			106	106	1.00	1962			1962	0.054			7	13	0.437	12	42
LT,SA,RT	B	3.50	1	1	15		N	1965	59	41	77	177	0.77	1825			1825	0.097	0.097		13	13	0.782	30	64
LT,SA	D	3.30	2	1	13		N	1945	142	418		560	0.25	1890			1890	0.296	0.296		38	38	0.782	60	33
RT	D	3.30	2	1	17	O		2085			130	130	1.00	1705	10	59	1764	0.074			10	10	0.782	24	75
LT,SA	D	3.40	4	1	13		N	1955	106	222		329	0.32	1885			1885	0.174			23	23	0.782	42	47
RT	D	3.80	4	1	20	O		2135			24	24	1.00	1772	18	107	1879	0.013			2	2	0.782	6	237
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

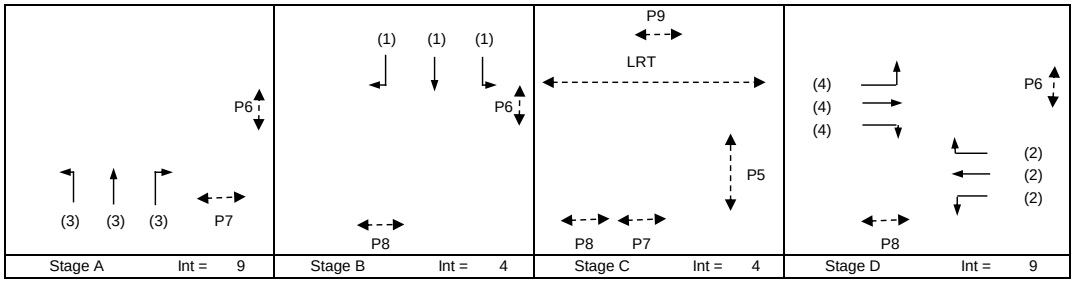
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Sen**	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
J7: Tsing Lun Road / Tsing Chung Koon Road		FILENAME :	Checked By:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	101	sec
Sum(y)		Y =	0.436	
Loss time		L =	39	sec
Total Flow		=	1225	pcu
Co	= (1.5*L+5)/(1-Y)	=	112.7	sec
Cm	= L/(1-Y)	=	69.2	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	39.2	%
Cp	= 0.9*L/(0.9-Y)	=	75.7	sec
Ymax	= 1-L/C	=	0.614	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	26.6	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	46	3
P7	A,C	5.5	5	5	6	23	5
P8	B,C,D	7.0	5	6	1	39	6
P9	C	7.5	5	6	1	11	6

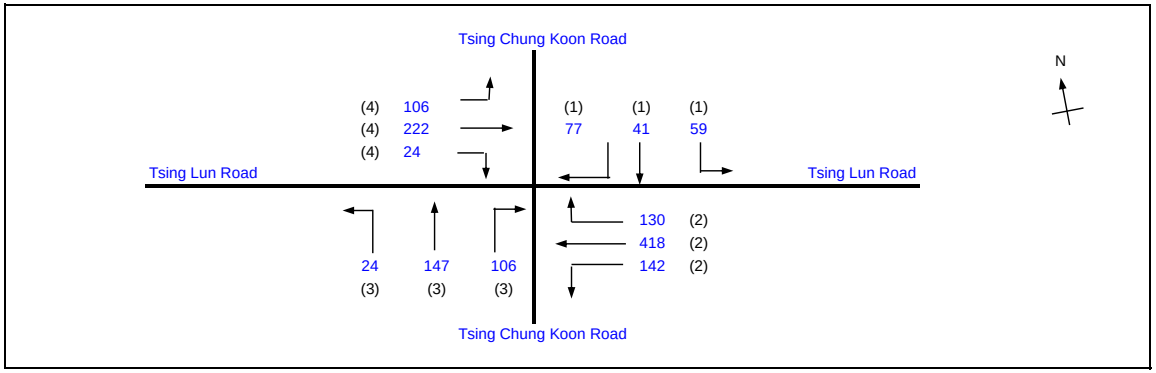
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	88	41		130	0.68	1888			1888	0.069	0.069		10	10	0.711	18	62
RT	A	3.70	3	1	18			2125			159	159	1.00	1962			1962	0.081			12	19	0.430	18	36
LT,SA,RT	B	3.50	1	1	15		N	1965	71	24	147	242	0.90	1802			1802	0.134	0.134		19	19	0.711	30	46
LT,SA	D	3.30	2	1	13		N	1945	106	336		442	0.24	1893			1893	0.233	0.233		33	33	0.711	48	33
RT	D	3.30	2	1	17	O		2085			35	35	1.00	1705	10	59	1764	0.020			3	3	0.711	6	124
LT,SA	D	3.40	4	1	13		N	1955	29	181		211	0.14	1924			1924	0.109			16	16	0.711	30	50
RT	D	3.80	4	1	20	O		2135			6	6	1.00	1772	18	107	1879	0.003			0	0	0.711	0	525
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

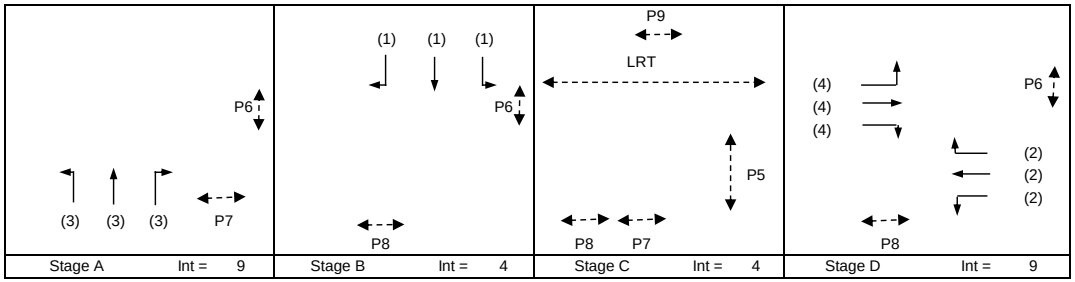
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Sen (Cycle120s)**		
J7: Tsing Lun Road / Tsing Chung Koon Road	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Checked By:	MM	Feb-21
		Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.480	
Loss time		L =	39	sec
Total Flow		=	1496	pcu
Co	= (1.5*L+5)/(1-Y)	=	122.1	sec
Cm	= L/(1-Y)	=	75.0	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	26.6	%
Cp	= 0.9*L/(0.9-Y)	=	83.6	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	26.6	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	50	3
P7	A,C	5.5	5	5	6	27	5
P8	B,C,D	7.0	5	6	1	38	6
P9	C	7.5	5	6	1	11	6

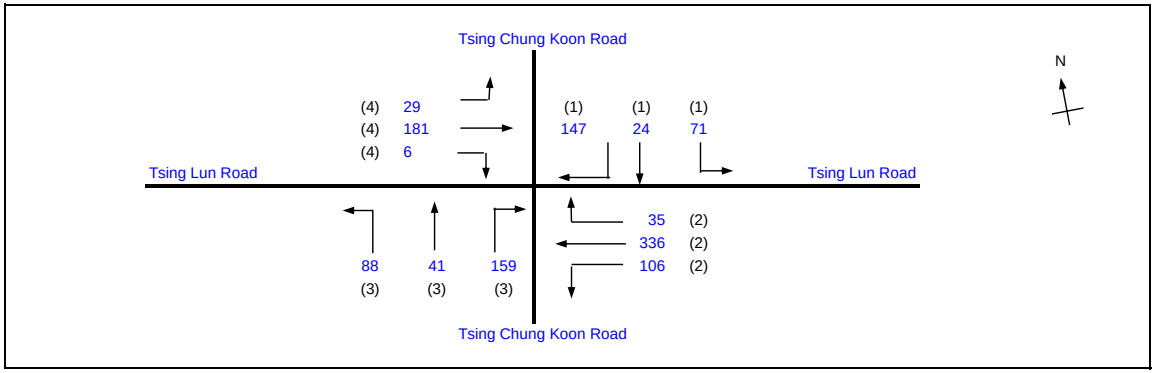
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	24	147		171	0.14	1972			1972	0.087	0.087		15	15	0.711	30	62
RT	A	3.70	3	1	18			2125			106	106	1.00	1962			1962	0.054			9	16	0.397	18	47
LT,SA,RT	B	3.50	1	1	15		N	1965	59	41	77	177	0.77	1825			1825	0.097	0.097		16	16	0.711	30	61
LT,SA	D	3.30	2	1	13		N	1945	142	418		560	0.25	1890			1890	0.296	0.296		50	50	0.711	60	31
RT	D	3.30	2	1	17	O		2085			130	130	1.00	1705	10	50	1755	0.074			12	12	0.711	24	69
LT,SA	D	3.40	4	1	13		N	1955	106	222		329	0.32	1885			1885	0.174			29	29	0.711	48	46
RT	D	3.80	4	1	20	O		2135			24	24	1.00	1772	18	90	1862	0.013			2	2	0.711	6	173
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

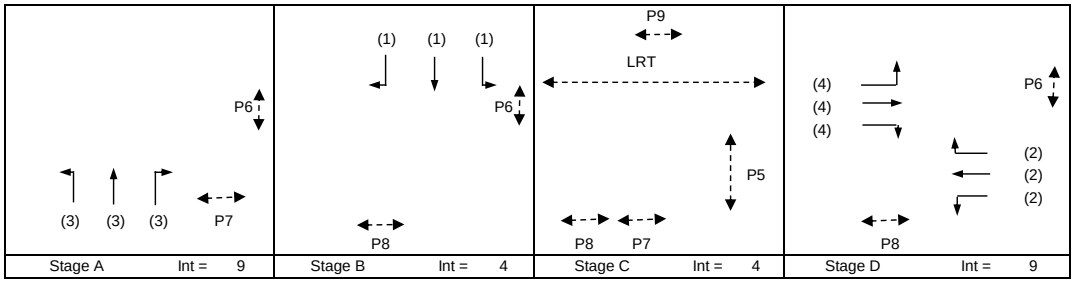
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Sen (Cycle 120s)**	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
J7: Tsing Lun Road / Tsing Chung Koon Road		FILENAME :	Checked By:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J7_Tsing Lun Rd_Tsing Chung Koon Rd_S	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.436	
Loss time		L =	39	sec
Total Flow		=	1225	pcu
Co	= (1.5*L+5)/(1-Y)	=	112.7	sec
Cm	= L/(1-Y)	=	69.2	sec
Yult		=	0.608	
R.C.ult	= (Yult-Y)/Y*100%	=	39.2	%
Cp	= 0.9*L/(0.9-Y)	=	75.7	sec
Ymax	= 1-L/C	=	0.675	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	39.2	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P5	C	6.0	5	5	5	16	5
P6	A,B,D	3.5	5	3	2	55	3
P7	A,C	5.5	5	5	6	26	5
P8	B,C,D	7.0	5	6	1	45	6
P9	C	7.5	5	6	1	11	6

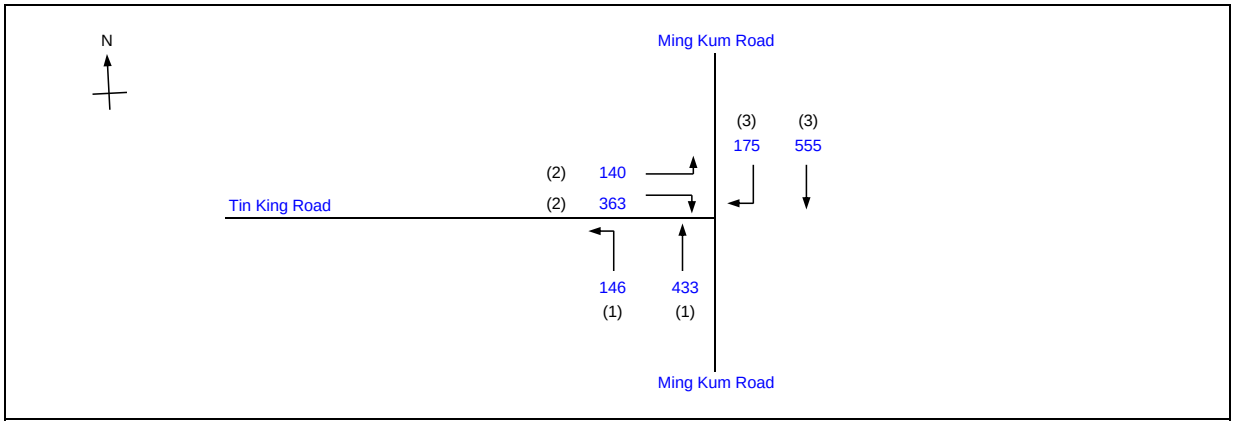
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.80	3	1	18		N	1995	88	41		130	0.68	1888			1888	0.069	0.069		13	13	0.647	24	61
RT	A	3.70	3	1	18			2125			159	159	1.00	1962			1962	0.081			15	25	0.391	24	39
LT,SA,RT	B	3.50	1	1	15		N	1965	71	24	147	242	0.90	1802			1802	0.134	0.134		25	25	0.647	36	47
LT,SA	D	3.30	2	1	13		N	1945	106	336		442	0.24	1893			1893	0.233	0.233		43	43	0.647	54	33
RT	D	3.30	2	1	17	O		2085			35	35	1.00	1705	10	50	1755	0.020			4	4	0.647	6	106
LT,SA	D	3.40	4	1	13		N	1955	29	181		211	0.14	1924			1924	0.109			20	20	0.647	30	51
RT	D	3.80	4	1	20	O		2135			6	6	1.00	1772	18	90	1862	0.003			1	1	0.647	0	378
PED,LRT	C																			16		16			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

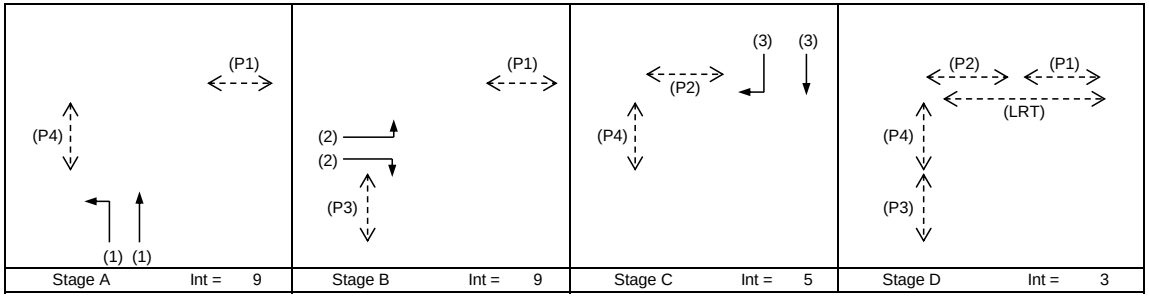
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 AM Sen**	Checked By:	MM	Feb-21
2028 AM DesignPeak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.507	
Loss time		L =	37	sec
Total Flow		=	1812	pcu
Co	= (1.5*L+5)/(1-Y)	=	122.7	sec
Cm	= L/(1-Y)	=	75.1	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	22.8	%
Cp	= 0.9*L/(0.9-Y)	=	84.7	sec
Ymax	= 1-L/C	=	0.657	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	16.7	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		39	6
P2	C	6.8	5	6		26	6
P3	B	4.5	5	4		11	4
P4	A,C	6.8	5	6		50	6

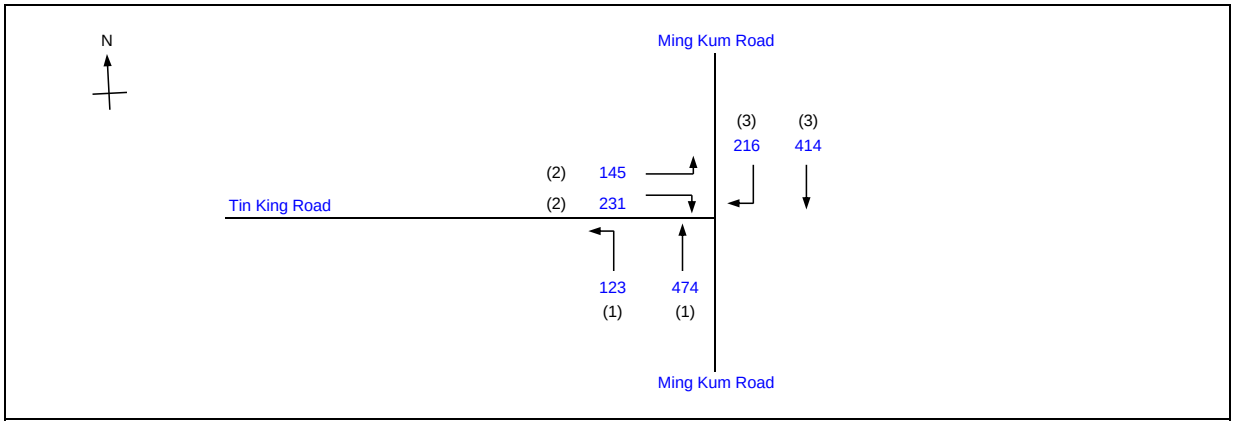
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	146	135		282	0.52	2018			2018	0.140			20	20	0.771	42	53
SA	A	3.80	1	1				2135		298		298	0.00	2135			2135	0.140	0.140		20	20	0.771	42	52
LT	B	3.50	2	1	15		N	1965	140			140	1.00	1786			1786	0.078	0.185		11	26	0.327	18	32
RT	B	3.50	2	1	21			2105			363	363	1.00	1965			1965	0.185			26	26	0.771	48	46
SA	C	3.50	3	1			N	1965		359		359	0.00	1965			1965	0.183			26	26	0.771	48	46
SA,RT	C	3.50	3	1	18			2105		195	175	370	0.47	2025			2025	0.183	0.183		26	26	0.771	48	46
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

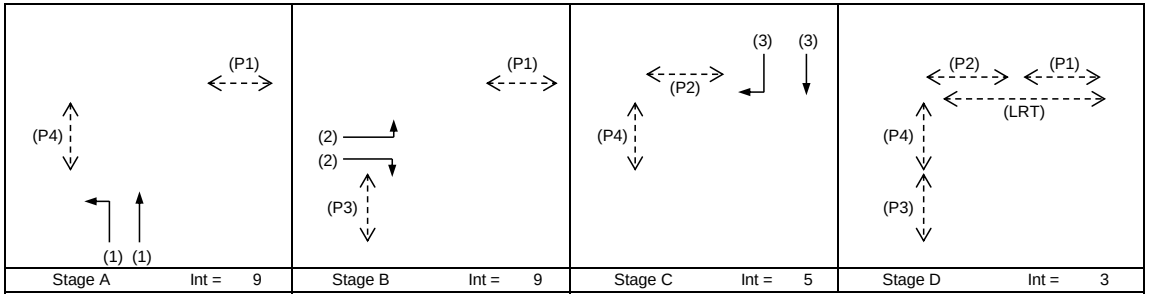
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 PM Sen**	Checked By:	MM	Feb-21
2028 PM DesignPeak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	108	sec
Sum(y)		Y =	0.420	
Loss time		L =	37	sec
Total Flow		=	1603	pcu
Co	= (1.5*L+5)/(1-Y)	=	104.3	sec
Cm	= L/(1-Y)	=	63.8	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	48.2	%
Cp	= 0.9*L/(0.9-Y)	=	69.4	sec
Ymax	= 1-L/C	=	0.657	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	40.9	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		47	6
P2	C	6.8	5	6		27	6
P3	B	4.5	5	4		14	4
P4	A,C	6.8	5	6		56	6

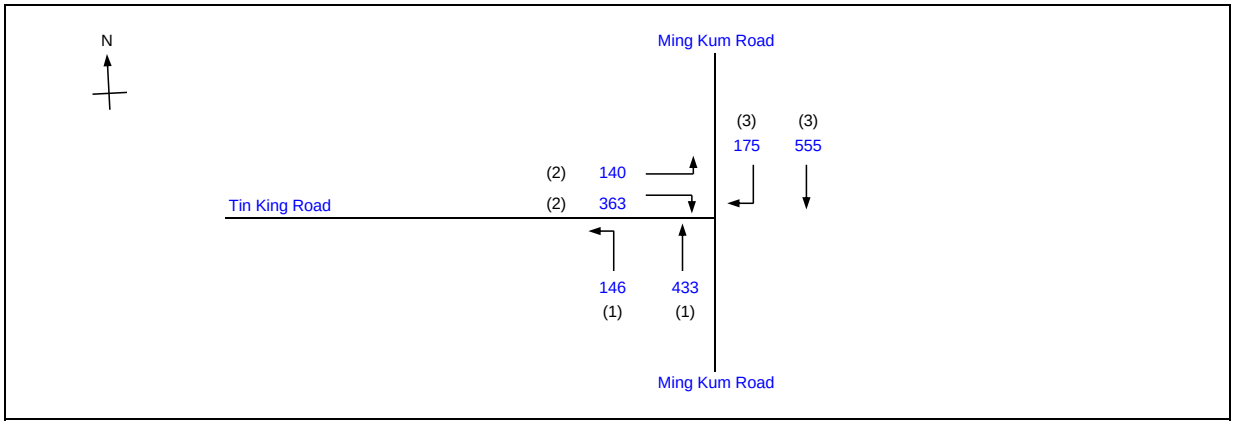
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	123	169		291	0.42	2034			2034	0.143			24	24	0.639	36	40
SA	A	3.80	1	1				2135		306		306	0.00	2135			2135	0.143	0.143		24	24	0.639	42	40
LT	B	3.50	2	1	15		N	1965	145			145	1.00	1786			1786	0.081	0.117		14	20	0.441	18	39
RT	B	3.50	2	1	21			2105			231	231	1.00	1965			1965	0.117			20	20	0.639	30	45
SA	C	3.50	3	1			N	1965		313		313	0.00	1965			1965	0.159			27	27	0.639	42	38
SA,RT	C	3.50	3	1	18			2105		101	216	317	0.68	1992			1992	0.159	0.159		27	27	0.639	42	38
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

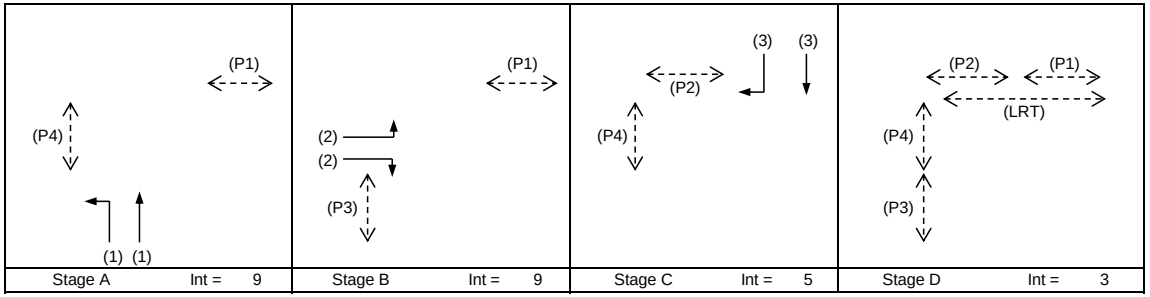
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 AM Sen (Cycle120s)**	Checked By:	MM	Feb-21
2028 AM DesignPeak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.507	
Loss time		L =	37	sec
Total Flow		=	1812	pcu
Co	= (1.5*L+5)/(1-Y)	=	122.7	sec
Cm	= L/(1-Y)	=	75.1	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	22.8	%
Cp	= 0.9*L/(0.9-Y)	=	84.7	sec
Ymax	= 1-L/C	=	0.692	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	22.8	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		45	6
P2	C	6.8	5	6		30	6
P3	B	4.5	5	4		13	4
P4	A,C	6.8	5	6		58	6

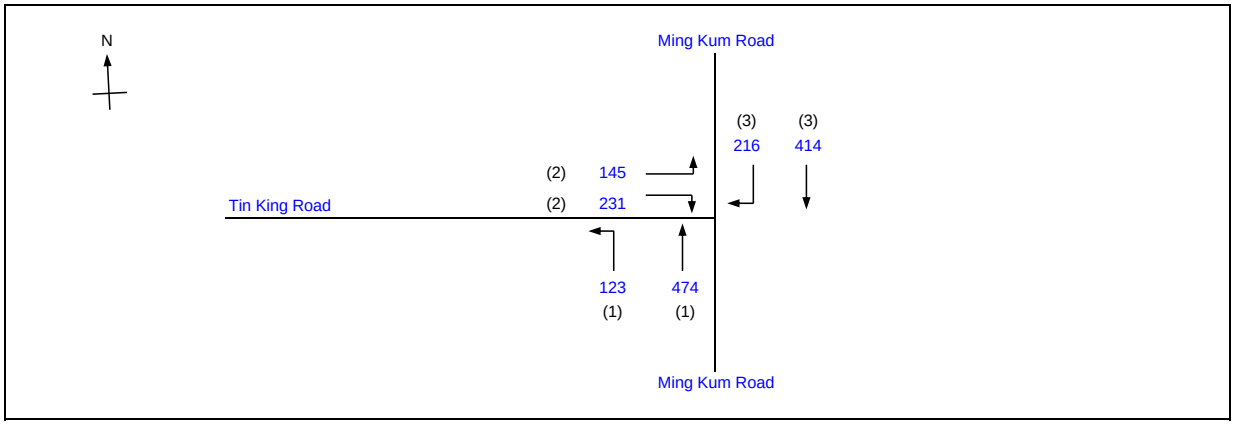
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	146	135		282	0.52	2018			2018	0.140			23	23	0.733	42	53
SA	A	3.80	1	1				2135		298		298	0.00	2135			2135	0.140	0.140		23	23	0.733	48	52
LT	B	3.50	2	1	15		N	1965	140			140	1.00	1786			1786	0.078	0.185		13	30	0.311	18	34
RT	B	3.50	2	1	21			2105			363	363	1.00	1965			1965	0.185			30	30	0.733	54	46
SA	C	3.50	3	1			N	1965		359		359	0.00	1965			1965	0.183			30	30	0.733	54	46
SA,RT	C	3.50	3	1	18			2105		195	175	370	0.47	2025			2025	0.183	0.183		30	30	0.733	54	46
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

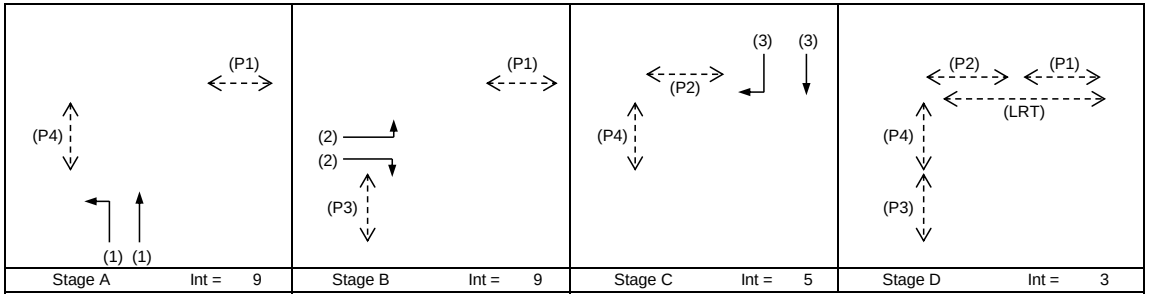
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	PROJECT NO. 81460	Prepared By:	JL	Feb-21
J8: Tin King Road / Ming Kum Road	**2028 PM Sen (Cycle120s)**	Checked By:	MM	Feb-21
2028 PM DesignPeak Hour Traffic Flows (Weekday)	FILENAME : J8_Tin King Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.420	
Loss time		L =	37	sec
Total Flow		=	1603	pcu
Co	= (1.5*L+5)/(1-Y)	=	104.3	sec
Cm	= L/(1-Y)	=	63.8	sec
Yult		=	0.623	
R.C.ult	= (Yult-Y)/Y*100%	=	48.2	%
Cp	= 0.9*L/(0.9-Y)	=	69.4	sec
Ymax	= 1-L/C	=	0.692	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	48.2	%



Pedestrian Phase	Stage	Lenth (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B	6.8	5	6		53	6
P2	C	6.8	5	6		31	6
P3	B	4.5	5	4		16	4
P4	A,C	6.8	5	6		65	6

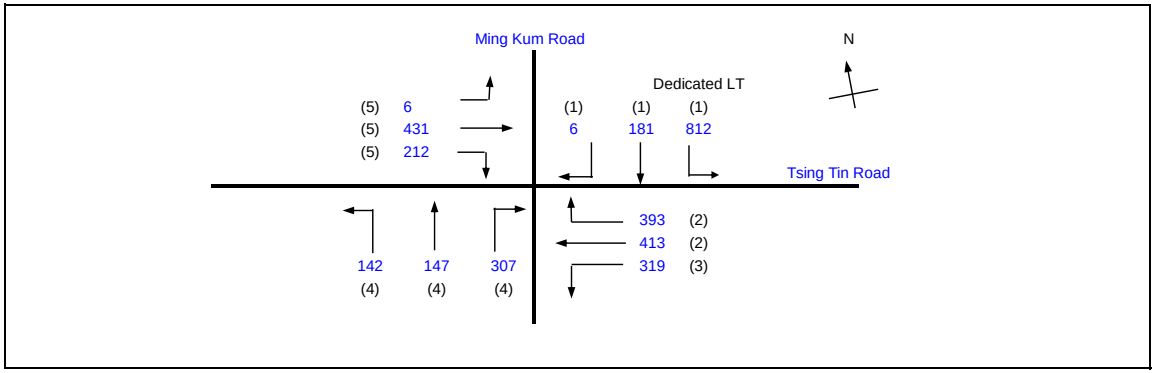
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				23					
LT,SA	A	3.50	1	1	18			2105	123	169		291	0.42	2034			2034	0.143			28	28	0.607	42	42
SA	A	3.80	1	1				2135		306		306	0.00	2135			2135	0.143	0.143		28	28	0.607	42	42
LT	B	3.50	2	1	15		N	1965	145			145	1.00	1786			1786	0.081	0.117		16	23	0.419	18	42
RT	B	3.50	2	1	21			2105			231	231	1.00	1965			1965	0.117			23	23	0.607	36	46
SA	C	3.50	3	1			N	1965		313		313	0.00	1965			1965	0.159			31	31	0.607	42	40
SA,RT	C	3.50	3	1	18			2105		101	216	317	0.68	1992			1992	0.159	0.159		31	31	0.607	42	40
LRT	D																			14		14			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

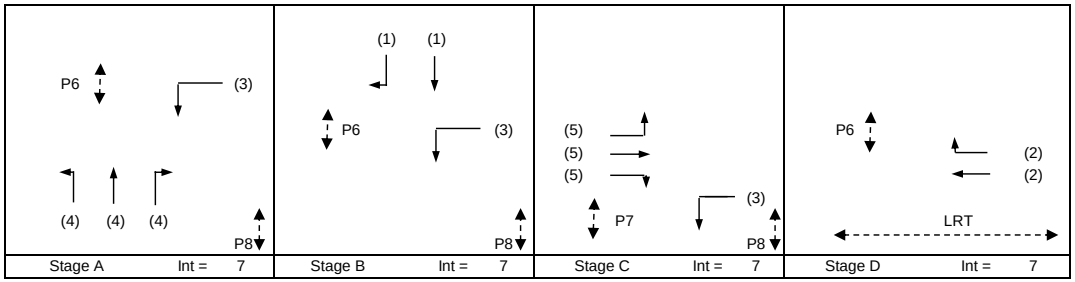
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Sen**	PROJECT NO.: 81460	Prepared By:	JL	Feb-21
J9: Tsing Tin Road / Ming Kum Road		FILENAME :	Checked By:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J9_Tsing Tin Road_Ming Kum Road_S.xls	Reviewed By:	OC	Feb-21



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	145	sec
Sum(y)		Y =	0.538	
Loss time		L =	24	sec
Total Flow		=	2556	pcu
Co	= (1.5*L+5)/(1-Y)	=	88.8	sec
Cm	= L/(1-Y)	=	52.0	sec
Yult		=	0.720	
R.C.ult	= (Yult-Y)/Y*100%	=	33.7	%
Cp	= 0.9*L/(0.9-Y)	=	59.7	sec
Ymax	= 1-L/C	=	0.834	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	39	%



Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		102	8
P7	C	5	5	4	5	20	4
P8	A,B,C	8	5	7		67	7

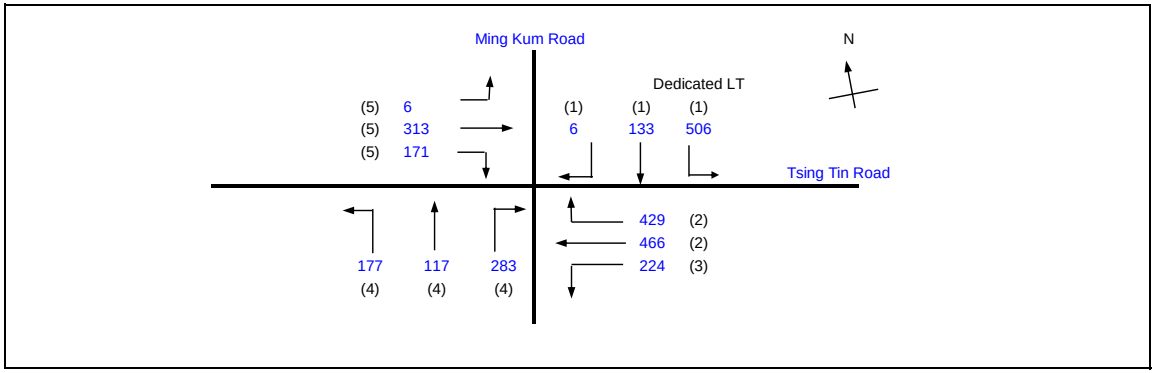
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				24					
LT	A	3.30	4	1	12		N	1945	142			142	1.00	1729			1729	0.082			18	39	0.305	24	40
SA,RT	A	3.30	4	1	18			2085		147	215	362	0.00	2085			2085	0.173	0.173		39	39	0.645	60	47
RT	A	3.30	4	1	16			2085			92	92	3.33	1588			1588	0.058			13	39	0.215	12	38
LT	A,B,C	3.50	3	1	21		N	1965	319			319	1.00	1834			1834	0.174			39	39	0.645	54	48
SA	B	3.30	1	2			N	4030		181		181	0.00	4030			4030	0.045	0.045		10	10	0.645	18	70
RT	B	3.30	1	1	20			2085			6	6	1.00	1940			1940	0.003			1	10	0.044	0	57
LT,SA	C	3.40	5	1	13		N	1955	6	206		212	0.03	1949			1949	0.109			24	24	0.645	42	60
SA,RT	C	3.40	5	1	15			2095		225	2	227	0.01	2093			2093	0.109	0.109		24	24	0.645	42	59
RT	C	3.40	5	1	18			2095			210	210	1.00	1934			1934	0.109			24	24	0.645	42	60
SA	D	3.40	2	1			N	1955		413		413	0.00	1955			1955	0.211	0.211		47	47	0.645	66	42
RT	D	3.40	2	2	18		N	4050			393	393	1.00	3738			3738	0.105			24	47	0.321	30	34

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

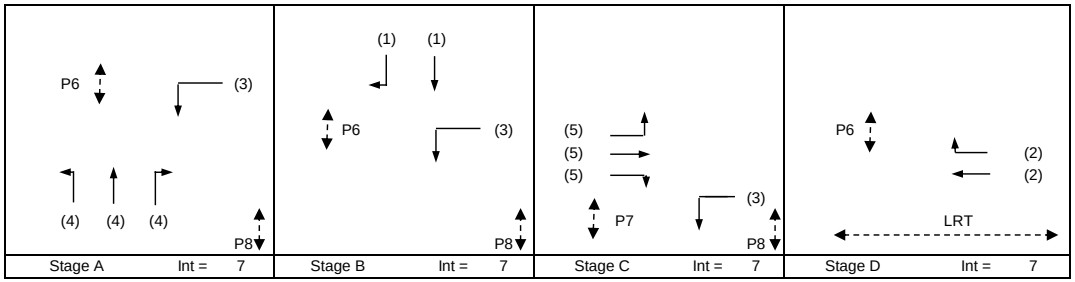
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Sen**		
J9: Tsing Tin Road / Ming Kum Road	PROJECT NO.: 81460	Prepared By:	JL Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)	FILENAME : J9_Tsing Tin Road_Ming Kum Road_S.xls	Checked By:	MM Feb-21
		Reviewed By:	OC Feb-21



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	145 sec
Sum(y)		Y =	0.502
Loss time		L =	24 sec
Total Flow		=	2325 pcu
Co	= (1.5*L+5)/(1-Y)	=	82.3 sec
Cm	= L/(1-Y)	=	48.2 sec
Yult		=	0.720
R.C.ult	= (Yult-Y)/Y*100%	=	43.5 %
Cp	= 0.9*L/(0.9-Y)	=	54.2 sec
Ymax	= 1-L/C	=	0.834
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	50 %

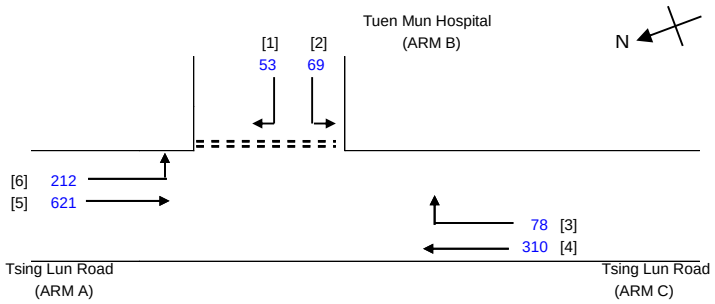


Pedestrian Phase	Stage	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P6	A,B,D	10	5	8		107	8
P7	C	5	5	4	5	16	4
P8	A,B,C	8	5	7		57	7

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				24					
LT	A	3.30	4	1	12		N	1945	177			177	1.00	1729			1729	0.102			25	36	0.416	30	44
SA,RT	A	3.30	4	1	18			2085		117	191	309	0.00	2085			2085	0.148	0.148		36	36	0.601	54	48
RT	A	3.30	4	1	16			2085			92	92	3.08	1618			1618	0.057			14	36	0.231	12	41
LT	A,B,C	3.50	3	1	21		N	1965	224			224	1.00	1834			1834	0.122			29	29	0.601	42	54
SA	B	3.30	1	2			N	4030		133		133	0.00	4030			4030	0.033	0.033		8	8	0.601	15	71
RT	B	3.30	1	1	20			2085			6	6	1.00	1940			1940	0.003			1	8	0.056	0	59
LT,SA	C	3.40	5	1	13		N	1955	6	154		160	0.04	1947			1947	0.082			20	20	0.601	30	62
SA,RT	C	3.40	5	1	15			2095		159	13	172	0.07	2080			2080	0.083	0.083		20	20	0.601	30	61
RT	C	3.40	5	1	18			2095			158	158	1.00	1934			1934	0.082			20	20	0.601	30	62
SA	D	3.40	2	1			N	1955		466		466	0.00	1955			1955	0.238	0.238		57	57	0.601	66	34
RT	D	3.40	2	2	18		N	4050			429	429	1.00	3738			3738	0.115			28	57	0.289	30	27

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 AM Sen**	PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.03	(metres)
W cr	=	0	(metres)
q a-b	=	212	(pcu/hr)
q a-c	=	621	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	12.00	(metres)
Vr c-b	=	32.5	(metres)
q c-a	=	310	(pcu/hr)
q c-b	=	77.51	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	41.1	(metres)
Vr b-a	=	36.7	(metres)
Vr b-c	=	36.7	(metres)
q b-a	=	53	(pcu/hr)
q b-c	=	69	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.0962118
E	=	1.1728455
F	=	1.6443391
Y	=	0.653965
F for (Qb-ac)	=	0.5670103

THE CAPACITY OF MOVEMENT :

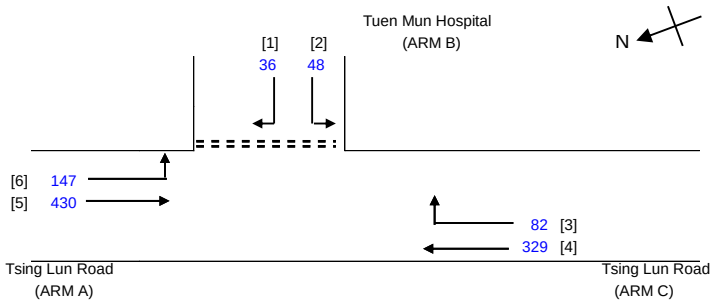
Q b-a	=	424			
Q b-c	=	677	Q b-c (O) =	656	
Q c-b	=	899			
Q b-ac	=	538			
TOTAL FLOW	=	1342.088926	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1242
DFC b-c	=	0.1019
DFC c-b	=	0.0862
DFC b-c (share lane)	=	0.2261

CRITICAL DFC = 0.23

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Territories	**2028 PM Sen**	PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J10: Tsing Lun Road / Access to Tuen Mun Hospital		FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J10_Tsing Lun Rd_Tuen Mun Hospital_P.xls	REVIEWED BY:	OC	Feb-21



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.03	(metres)
W cr	=	0	(metres)
q a-b	=	147	(pcu/hr)
q a-c	=	430	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	12.00	(metres)
Vr c-b	=	32.5	(metres)
q c-a	=	329	(pcu/hr)
q c-b	=	82.23	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	6.50	(metres)
W b-c	=	6.50	(metres)
Vl b-a	=	41.1	(metres)
Vr b-a	=	36.7	(metres)
Vr b-c	=	36.7	(metres)
q b-a	=	36	(pcu/hr)
q b-c	=	48	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.0962118
E	=	1.1728455
F	=	1.6443391
Y	=	0.653965
F for (Qb-ac)	=	0.5670103

THE CAPACITY OF MOVEMENT :

Q b-a	=	475		
Q b-c	=	738	Q b-c (O) =	723.8
Q c-b	=	999		
Q b-ac	=	595.3		
TOTAL FLOW	=	1071.608252	(PCU/HR)	

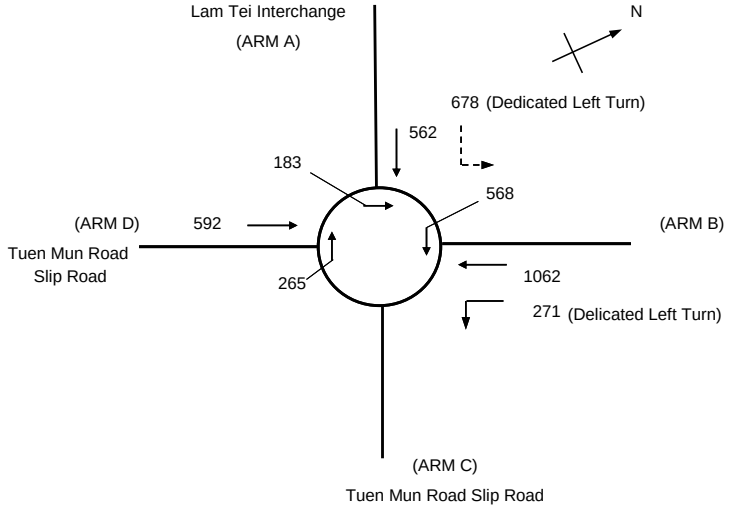
COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0767
DFC b-c	=	0.0647
DFC c-b	=	0.0823
DFC b-c (share lane)	=	0.1414

CRITICAL DFC = 0.14

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J11 : Lam Tei Interchange	**2028 AM Sen**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	Feb-21

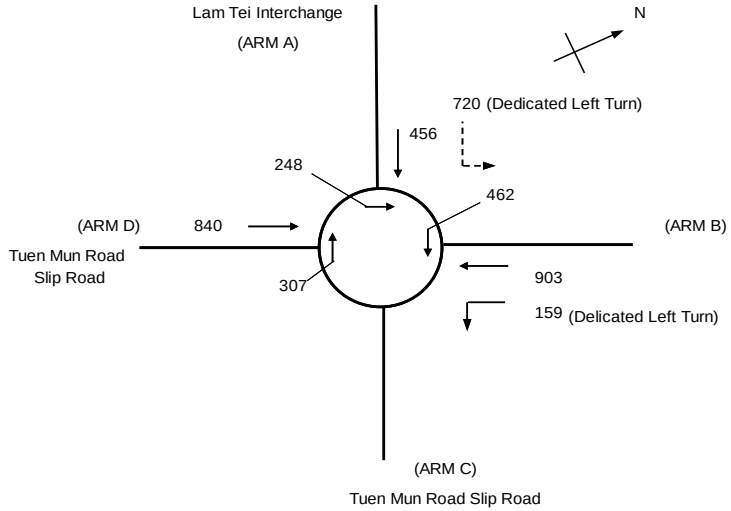
With Junction Improvement Scheme under Tuen Mun Area 54 developments (Argeement No. CE38/2011(CE) and Approved Planning Application A/TM/500)



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	6.0	7.9		3.2			
E	=	Entry width (m)	10.4	12.3		8.0			
L	=	Effective length of flare (m)	10.5	3.0		16.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	89.0	89.0		89.0			
A	=	Entry angle (degree)	30.0	29.0		32.0			
Q	=	Entry flow (pcu/h)	562	1062		592			
Qc	=	Circulating flow across entry (pcu/h)	183	568		265			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.67	2.35		0.48			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.02			
X2	=	V + ((E-V)/(1+2S))	7.88	8.67		5.65			
M	=	EXP((D-60)/10)	18	18		18			
F	=	303*X2	2388	2628		1712			
Td	=	1+(0.5/(1+M))	1.03	1.03		1.03			
Fc	=	0.21*Td(1+0.2*X2)	0.56	0.59		0.46			
Qe	=	K(F-Fc*Qc)	2362	2358		1627	Total In Sum =	2216	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.24	0.45		0.36	DFC of Critical Approach =	0.45	

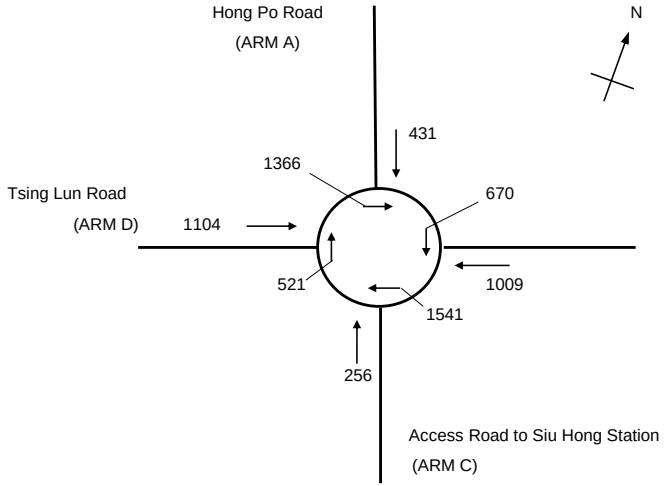
OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J11 : Lam Tei Interchange	**2028 PM Sen**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J11_Lam Tei Interchange_R.xls	REVIEWED BY:	OC	Feb-21

With Junction Improvement Scheme under Tuen Mun Area 54 developments (Argeement No. CE38/2011(CE) and Approved Planning Application A/TM/500)



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	6.0	7.9		3.2			
E	=	Entry width (m)	10.4	12.3		8.0			
L	=	Effective length of flare (m)	10.5	3.0		16.0			
R	=	Entry radius (m)	63.0	41.0		52.0			
D	=	Inscribed circle diameter (m)	89.0	89.0		89.0			
A	=	Entry angle (degree)	30.0	29.0		32.0			
Q	=	Entry flow (pcu/h)	456	903		840			
Qc	=	Circulating flow across entry (pcu/h)	248	462		307			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	0.67	2.35		0.48			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.03		1.02			
X2	=	V + ((E-V)/(1+2S))	7.88	8.67		5.65			
M	=	EXP((D-60)/10)	18	18		18			
F	=	303*X2	2388	2628		1712			
Td	=	1+(0.5/(1+M))	1.03	1.03		1.03			
Fc	=	0.21*Td(1+0.2*X2)	0.56	0.59		0.46			
Qe	=	K(F-Fc*Qc)	2325	2423		1607	Total In Sum =	2199	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.20	0.37		0.52	DFC of Critical Approach =	0.52	

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J12 : Tsing Lun Road / Hong Po Road	**2028 AM Sen**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 AM Design Peak Hour Traffic Flows (Weekday)		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	Feb-21

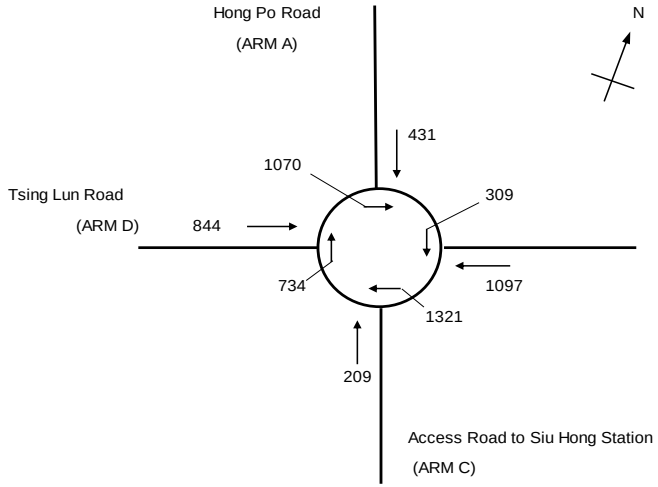


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.8	3.5	3.3	4.2
E	=	Entry width (m)	9.0	9.5	8.4	7.4
L	=	Effective length of flare (m)	7.0	10.0	8.0	25.0
R	=	Entry radius (m)	30.0	12.0	35.0	42.0
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0
Q	=	Entry flow (pcu/h)	431	1008.7	256	1104
Qc	=	Circulating flow across entry (pcu/h)	1366	669.7	1541	521
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03
X2	=	V + ((E-V)/(1+2S))	4.42	5.6	4.93	6.47
M	=	EXP((D-60)/10)	12	12.2	12	12
F	=	303*X2	1338	1683.1	1495	1960
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50
Qe	=	K(F-Fc*Qc)	750	1244.3	788	1743
DFC	=	Design flow/Capacity = Q/Qe	0.57	0.8	0.32	0.63

Total In Sum = 2799 PCU

DFC of Critical Approach = 0.81

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Rezoning Application for a Religious Institution and Columbarium in Tin Kwong Lun Yee , Tuen Mun, New Terr		PROJECT NO.: 81460	PREPARED BY:	JL	Feb-21
J12 : Tsing Lun Road / Hong Po Road	**2028 PM Sen**	FILENAME :	CHECKED BY:	MM	Feb-21
2028 PM Design Peak Hour Traffic Flows (Weekday)		J12_Tsing Lun Rd_Hong Po Rd_R.xls	REVIEWED BY:	OC	Feb-21



ARM			A	B	C	D			
INPUT PARAMETERS:									
V	=	Approach half width (m)	2.8	3.5	3.3	4.2			
E	=	Entry width (m)	9.0	9.5	8.4	7.4			
L	=	Effective length of flare (m)	7.0	10.0	8.0	25.0			
R	=	Entry radius (m)	30.0	12.0	35.0	42.0			
D	=	Inscribed circle diameter (m)	85.0	85.0	85.0	85.0			
A	=	Entry angle (degree)	45.0	48.0	50.0	30.0			
Q	=	Entry flow (pcu/h)	431	1097.2	209	844			
Qc	=	Circulating flow across entry (pcu/h)	1070	308.9	1321	734			
OUTPUT PARAMETERS:									
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	1.0	1.03	0.20			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.96	0.9	0.95	1.03			
X2	=	V + ((E-V)/(1+2S))	4.42	5.6	4.93	6.47			
M	=	EXP((D-60)/10)	12	12.2	12	12			
F	=	303*X2	1338	1683.1	1495	1960			
Td	=	1+(0.5/(1+M))	1.04	1.0	1.04	1.04			
Fc	=	0.21*Td(1+0.2*X2)	0.41	0.5	0.43	0.50			
Qe	=	K(F-Fc*Qc)	867	1394.5	878	1634	Total In Sum =	2580	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.50	0.8	0.24	0.52	DFC of Critical Approach =	0.79	

Compilation of a Management Plan by Tin Kwong Lun Yee (天罡隆義) Located at Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT to Facilitate the Application of Columbarium (骨灰龕) Licence Under the Private Columbaria Ordinance, Cap 630

Location : Lot Nos. 1744A – C & 1744F - I in D.D. 132, Tuen Mun, NT

(Feburary 2021)

Prepared by LEUNG Wing-tai, William
(Associate Traffic Management Consultant of Toco Planning Consultants Ltd)

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Compilation of a Management Plan by Tin Kwong Lun Yee (天罡隆義) Located at Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT to Facilitate the Application of Columbarium (骨灰龕) Licence Under the Private Columbaria Ordinance, Cap 630

Location : Lot Nos. 1744A – C & 1744F - I in D.D. 132, Tuen Mun, NT

1. Introduction

This paper, which comprises the traffic and crowd management plans and a contingency plan is prepared by the aforesaid Traffic Management Consultant on behalf of the Applicant, Miss YIP Yuk-ping, Rita of Tin Kwong Lun Yee **(天罡隆義)** located at Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT, for facilitating the application of columbarium licence under the Private Columbaria Ordinance (PC Ord), Cap 630.

2. Background

2.1 Tin Kwong Lun Yee **(天罡隆義)** (hereafter refer to as TKLY) is located at the low-level hill side of Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT, north west of Po Tin Estate, Tuen Mun and it occupies a site area of about **3137 m²**. Its religion is Tibetan Buddhism Vajrayana and it started to operation as a columbarium in 2010 offering niche spaces for columbarium service. The site is large and is built in a rectangular shape stretching from the south to the north along the western hill side of Kwong Shan Tusen. Three isolated 2-storey columbarium blocks (consist of a total of 6 columbarium halls) are built in a row inside the site with the front of the blocks facing east and a large compound is built in front of the columbarium blocks. The site is easily accessible via Ming Kum Road, Hing Kwai Street and Hing Fu Street, Tuen Mun; and an unnamed single-track access road (hereafter refer to as the unnamed concrete slip road) which connects with Hing Fu Street Roundabout near Kwong Shan Tsuen. Hing Fu Street is a secondary 2-lane road, which ends with a cul-de-sac roundabout to the north rear of Po Tin Estate. The Ming Kum Road, Hing Kwai Street and Tsun Wen Road located on the east of Po Tin Estate are 2-lane 2-way roads, which are the main distributors in the area. The unnamed concrete slip road between Hing Fu Street cul-de-sac roundabout and TKLY is about 4 m wide and is suitable for vehicle running, e.g. 24-seat bus. Public Transport Interchange is located underneath Po Tin Estate and public transport services are available on the aforesaid 3 major roads to serve the residents and developments in the area. Location map is at **Annex 'D'**. TKLY is in the process of making

application to the Town Planning Board through Toco Planning Consultants Ltd under Section 12A of the Town Planning Ordinance (TPOrd) for the rezoning of the site from "GB" to "G/IC" for the establishment of a religious institution and columbarium. The Applicant also employs A&B Architects Ltd to assist her to design the future layout plan of the site where some alterations and constructions will be made in due course to upgrade the facilities inside the site concerned. The OZZO Technology (HK) Ltd is employed by the Applicant to conduct traffic assessment for TKLY and its vicinity area and to prepare the Traffic Impact Assessment (TIA). Columbarium niche spaces are already built in the 3 columbarium blocks and TKLY proposes to make application for a columbarium housing **11094** niche spaces, **8** of which were sold and interred before 2017-06-30 (pre-cut-off time), **928** of which are sold but not yet occupied and **10158** are available for sale.

2.2 If the application under Section 12A for the rezoning of TKLY site and the application of columbarium licence to the PCLB are approved in the nearest due course, the Applicant undertakes to implement a series of stringent measures such as tight administrative and operational measures with a view to ensuring an orderly and smooth worship inside TKLY, namely :-

(a) To close the columbarium on Ching Ming and Chung Yeung Festival periods, which include the Festival Days and their shadow periods (i.e. the Festival Days and 2 consecutive weekends before & after the Festival Days)(the Festival period for either Ching Ming or Chung Yeung Festival is defined by OZZO Technology (HK) Ltd to include the Festival Day and its shadow period);

(b) With a view to reducing the number of traffic trips, traffic noise impact affecting the adjacent school nearby and crowd impact in Hing Fu Street and its vicinity, the Applicant proposes the worship periods across the Festival Period to span across a total of **26 weekdays** preceding and after the Festival Day for visitors to conduct worship activities at TKLY, [i.e. 20 weekdays within the Festival period (10 weekdays preceding the Festival Day and 10 weekdays after the Festival Day during which free shuttle bus services will be provided and 3 weekdays on non-Festival period preceding the Festival Day and 3 weekdays on non-Festival period after the Festival Day (i.e. **a total of 26 weekdays to fully accommodate the visitors to come to TKLY for worship**)];

(c) To limit the number of visitors to TKLY for worship to **not more than 200 persons per hour** during each worship day;

(d) To implement visit-by-appointment system via E-booking for arranging visitors to visit the columbarium using pre-arranged dates

and time slots so that the holding capacity of the columbarium at any one time will not be exceeded;

(e) To provide free shuttle bus services to convey visitors to and from the columbarium for worship in order to reduce possible traffic impact in the area; and the traffic arrangement and opening hours of the columbarium is highlighted in the following table, viz :-

Time Period	**Arrangement**	**Opening Hours**
Festival Period ● Festival Day (Ching Ming/Chung Yeung Festival) ● 2 consecutive weekends (4 Saturdays & 4 Sundays) preceding and after the Festival Day	Columbarium closed (a total of 9 days)	Not applied
● Festival Period preceding the Festival Day – weekdays (Monday – Friday) = **10 weekdays** ● Festival Period after the Festival Day – weekdays (Monday – Friday) = **10 weekdays** (i.e. **a total of 20 weekdays during the Festival Period**)	● No parking w/i site allowed ● **Free shuttle bus service in operation** ● Only loading/unloading activities by P/Cs & taxis w/i site for disabled and elderly allowed	**0800 hr – 1700 hr (9 hrs/day)**
Non-Festival Period – Daily (Monday – Sunday) **(i.e. a total of 6 days)**	● Parking w/i site allowed ● Loading/unloading activities by P/Cs & taxis w/i site allowed ● No free shuttle bus service	**1000 hr – 1700 hr (7 hrs/day)**

(f) Only niche owners and their family members with proof of memberships are allowed to enter the columbarium for conducting worship activities. Other visitors will only be allowed to access the columbarium when leaded and permitted by the staff of the

columbarium, etc; &

(g) When licence is approved in due course, it is expected that more niches will be sold and the niche spaces will be fully occupied gradually the latest by the year of 2025 as proposed by the Applicant, therefore an increase of worshippers to TKLY will occur during subsequent festive seasons. The Applicant undertakes to implement enhanced strategic traffic and crowd management measures at TKLY and its vicinity to ensure the safe arrival and departure of worshippers and the smooth running of the event(s).

2.3 As far as transport service is concerned, TKLY is easily accessible by private/public transport. There are at least 5 types of transport facilities for visitors to reach TKLY, namely :--

(a) By free shuttle bus services provided by TKLY (circular route) from TKLY to MTR West Rail Siu Hong Stn North PTI to pick up visitors to TKLY & vice versa

(b) By LRT services via Tin King LRT Stop, Tuen Mun & then walk to TKLY;

(c) By bus to the bus stops at or opposite to Po Tin Estate, Ming Kum Road, Tuen Mun & then walk to TKLY;

(d) By bus to the Po Tin PTI, Tuen Mun & then walk to TKLY; &

(e) By GMB to the GMB Stops at Ming Kum Rd o/s Po Tin Estate & then walk to TKLY.

2.4 Visitors resort to driving to TKLY will be advised in advance that no parking facilities except for disabled/elderly will be provided by the site concerned during the weekdays of the Festival Period and they can only drop off visitors at Hing Fu Street cul-de-sac roundabout and then walk up the unnamed concrete slip road to reach TKLY. In any case, visitors are strongly advised to resort to the use of the free shuttle bus services provided by TKLY.

2.5 A site reconnaissance (Recce) at TKLY and its surrounding areas was conducted on 2019-06-06 by the author. The author took LRT route 615 from Yuen Long MTR LRT Stop to reach Tin King LRT Stop and then walked to TKLY via Ming Kum Road, Hing Kwai Street, Hing Fu Street and the unnamed concrete slip road outside the site concerned. The walking distance was about 15-20 minutes in normal pace. The Applicant, Miss YIP Yuk-ping was met at TKLY site and adequate information concerning the TKLY columbarium was obtained from her.

2.6 TKLY lies on the lower mid-level of Kwong Shan Tsuen and is built in a rectangular shape stretching from south to north along the hill side and is accessible via an unnamed concrete slip road (about 4m wide) linking

with the cul-de-sac roundabout of Hing Fu Street, Tuen Mun. The entrance is located on the south east corner of the site concerned and 3 two-storey columbarium blocks are built inside the site (Block 1 on the south side, Block 2 & 3 are located to the north of Block 1 respectively). The columbarium blocks are built with the front of the 3 columbarium blocks facing east whilst at the rear of the columbarium blocks lies another long and wide alley with the retaining wall lies behind it to the west. A large compound is built in front of the columbarium blocks facing east. The columbarium halls are built in tradition columbarium style and in good serviceable condition. There were no incense burners located inside TKLY and the Applicant stated that no burning of any incense materials be allowed inside the site concerned which is one of their house rules that worshippers need to adhere to.

2.7 For escape route, there are adequate space and staircases for worshippers to enter the columbarium halls and leave vice versa. The layout of the columbarium premises do provide adequate escape/dispersal routes for worshippers to disperse in the event of fire or other emergency situations. Fire extinguishers were seen placing at prominent locations at the entrances of the columbarium halls. The Applicant has commissioned Toco Planning Consultants Ltd as her planner and A&B Architects Ltd as her site designer for some renovations and the latter will prepare an updated layout plan of the site to enhance Applicant's application under Section 12A of TPOrd. In future, the site will consist 3 columbarium blocks, two accessible parking spaces for visitors and 10 private car spaces for staff/visitors, 4 shuttle bus parking spaces and other facilities and the management office will be located on the G/F of columbarium Block 2. Other necessary service rooms will also be available within the columbarium blocks. The newly designed master layout plan of TKLY is at **Annex 'D'**

3. Basic Information of the Columbarium

The basic information of the columbarium concerned is as follows :-

Name of the columbarium : Tin Kwong Lun Yee **(天罡隆義)**
Address of the columbarium : Tin Kwong Lun Yee, Kwong Shan Tsuen, Hing Fu Street, Tuen Mun, NT
Year of commencement of operation : 2010
Name of operator : Miss YIP Yuk-ping, Rita
Status of operator : Tin Kwong Lun Yee Limited
Religion of the columbarium : Tibetan Buddhism Vajrayana

4. Site Information and Building Arrangement

This columbarium is composed of :

- 3 columbarium blocks (a total of 6 columbarium halls)(about **285.2 m²**)(holding capacity : **142.6** persons at any one time)
- No joss paper burner
- No refuse storage room(s) – rubbish will be taken to nearby refuse collection point near to Hing Fu Street cul-de-sac for dumping on a daily basis.
- Other buildings which are facilities necessary for or ancillary to the operation of the columbarium (please specify nature and number)
  - (a) Female Toilet : 2 (Female/Male share use)
  - (b) Male Toilet : (same as above)
  - (c) Disabled Toilet : (No)
  - (d) Kitchen : (No)
  - (e) Office : (1)

- Other facilities necessary for or ancillary to the operation of the columbarium (e.g. parking facilities, loading and unloading facilities) (please specify nature, area and number) **2 accessible car parking spaces and 10 P/C parking spaces for staff/visitors, and 4 loading/unloading bays for the proposed shuttle bus services on weekdays during the Festival Periods. One space will be provided for car/taxi pick-up/drop-off activities on normal days. The car parking spaces are available for staff/visitors only on normal days outside the Festival Periods. They will be closed for parking, but open for car/taxi pick-up/drop-off activities for disabled and elderly only on weekdays within the Festival Periods.**

5. The holding Capacity of Visitors and Admission Control

The Applicant provides the following information :

- Opening hours : **Non-Festival Period** - 1000 – 1700 hours
- Opening hours during Ching Ming and Chung Yeung Festival Periods :
  - (a) **Columbarium will be closed during Ching Ming and Chung Yeung Festival Days and the shadow periods** (i.e. 2 consecutive weekends before and after the Festival Day); &
  - (b) **Festival Period** (i.e. weekdays :- 0800 hrs – 1700 hrs).

- Visitors holding capacity of the 3 columbarium blocks: **142.6 persons at any one time**
- Measures to be adopted to ensure that the number of visitors inside the columbarium will not exceed the holding capacity for visitors : the Applicant

undertakes to implement a straight **visit-by-appointment system** in future operations using around **26 weekdays** to evenly distribute the number of worshippers going to TKLY by pre-arranged appointments to ensure that only a controllable number of worshippers are allowed to access TKLY for worship, hence the holding capacity of the columbarium concerned will not be exceeded and a safe worship situation is provided. In addition, free shuttle bus services will be provided to convey visitors to and from TKLY to conduct worship activities within the 20 weekdays of the Festival Period. Details of the aforesaid arrangements are highlighted in subsequent paragraphs.

- Sale agreement and house rule concerning admission control : there is no mention of **admission control** in the sale agreement previously in use, yet such clause and other house rules will be incorporated in future sale agreement(s) for the compliance of niche buyers. Moreover, the Applicant will set up house rules concerning admission control over worshippers and will inform the niche purchasers about the house rules concerned well in advance prior to Ching Ming and Chung Yeung Festivals. Future sale agreements will be processed through registered solicitor firm and the clause concerned will include the following rules, namely :-
  - (i) The niche purchasers will be obliged to comply with the house rule that no worship activities will be conducted during Ching Ming and Chung Yeung Festival Days and 2 consecutive weeks before and after the Festival Day and **worship activities at TKLY can only be conducted during other weekdays during the Festival period or during the non-Festival Period before and after the Festival Day**;
  - (ii) Niche purchasers will be obliged to adhere to the visit-by-appointment system through E-booking & the admission control to be implemented by TKLY;
  - (iii) No parking facilities will be provided by TKLY during the Festival Period except for disabled & elderly with advance E-booking through visit-by-appointment system;
  - (iv) Niche purchasers and his/her accompanies will be assigned and agreed to resort to the use of free shuttle bus services provided by TKLY through visit-by-appointment system by way of E-booking as far as possible;
  - (v) Booking by telephone, SMS, WhatsApp and Email will be available for all members once the visit-by-appointment system is activated which will usually be 2 months in advance of the Festival. Each member and their accompanies has to reserve a place via visit-by-appointment system on a first-come first-serve basis prior to their visits to the columbarium and members will be informed of the followings :
    - (a) Visit date;
    - (b) Admission time (1-hour time slot);
    - (c) Total nos. of visitors permitted during the visit; &
    - (d) For visitors apply for shuttle bus services, shuttle bus permits which

show the assigned pick-up time of shuttle bus services and location of pick up point will be given (i.e. by mail or electronic means).

(vi) Niche purchasers and his/her accompanies need to adhere to the house rules of TKLY for the worship;

(vii) A notice in Chinese & English will be given to the niche purchasers during the course of signing the sale agreements with the agreed clause and house rules appended on them so that niche purchasers are properly notified about the aforesaid rules; &

(viii) TKLY has the right to deny access if niche purchasers & the accompanies fail to adhere to the clause and house rules concerned.

6. Columbarium Site Area, Holding Capacity, Calculation of Visitors' Attendance & Free Shuttle Bus Services

6.1 TKLY site area = about 3137 m^2

By adopting the BD's CoP the calculation of columbarium factor of 2 m^2 per person, the site concerned in theory can hold up a maximum of :-

3137 m^2 ÷ 2 m^2 = **1569 persons at any one time.**

In this proposed columbarium case, the latest proposal is to limit the visitors' attendance to not more than 200 visitors per hour during each worship day, the site concerned has ample space to hold up this small amount of visitors at any one time and the management of the visitors inside TKLY will be under easy control without creating any crowd chaotic situation; and the worship activities can be conducted in an orderly and smooth manner without any hiccups.

TKLY compound area = about **1320 m^2**

Holding capacity of the compound : 1320 m^2 ÷ 2 m^2 = **660 persons at any one time**

The 6 columbarium halls have an area of 285.2 m^2.

Holding capacity = **142.6** persons at any one time.

Visitors attendance : the Applicant will implement the visit-by-appointment system (VBAS) **plus free shuttle bus services** for the weekdays of the festival period (i.e. the 20 weekdays within the Festival Period where the VBAS will be implemented. This arrangement will apply to Ching Ming and Chung Yeung Festivals. During Ching Ming or Chung Yeung Festival Periods the operation hours of TKLY on Festival weekdays will be set bet. **0800 hrs & 1700 hrs** daily (i.e. 9 hrs/day) whereas for the 6 non-festival days worship activities at TKLY before and after the Festival Day, no free shuttle bus services will be provided and the operation hours will be bet. **1000 hrs and 1700 hrs** daily (i.e. 7

hrs/day).

Assuming by the year of 2025 the niche spaces of TKLY will be fully occupied and interred, i.e. a total of 11094 niche spaces (ns) occupied. The average niche spaces' visitors are assumed to be 4 visitors per niche. By calculation the daily visitors' attendance amount the **26 days** period in average is :-

Calculation of Visitors During Festival Period	**Attendance during the 20 weekdays w/i the Festival Period (opening hr : 0800 hrs – 1700 hrs)**	**Attendance during the 6 days of the non-Festival Period (opening hr : 1000 hrs – 1700 hrs)**
Total No. of visitors during Festival Period = 11094 ns x 4 visitors = **44376 visitors** Attendance during the 20 weekdays of the Festival Period = **36000 visitors** Attendance during the 6 days non-Festival Period = **8376**	36000 visitors ÷ 20 days = 1800 visitors/day 1800 visitors ÷ 9 hrs = 200 visitors/hr	8376 visitors ÷ 6 days = 1396 visitors/day 1396 visitor ÷ 7 hrs = 199.4 visitors/hr

The above calculation shows that the hourly attendance of visitors to the columbarium is not more than 200 visitors/hr and the figure is well within the holding capacity of the compound of TKLY (660 visitors at any one time).

6.2 According to Ozzo's TIA survey and calculation, around 97.3% of the daily person trips use the free shuttle bus services for arriving/departing the surveyed columbarium in Tai Wai during Ching Ming Festival main day. Out of the remaining 2.7% of the daily trips, only one car trip was recorded and all others are taxi trips, which indicated that majority of the worshippers resorted to the use of free shuttle bus services provided by the columbarium concerned through advance booking.

6.3 In this application, the Applicant also proposes to provide free shuttle bus services to convey worshippers to & from TKLY for worship and the shuttle bus services will also cover **20 weekdays** within the Festival period. In the TIA prepared by Ozzo the following modal splits for visitors accessing TKLY are assumed :-

Mode	Percent
Shuttle Bus	95%
Car/Taxi	3%
Public transport/walk	2%
Total	100%

6.4 Based on the assumed model splits, the amount of visitors (200/hour) going to TKLY by different modes are highlighted in the following Table :-

Mode	In			Out		
	Visitors/hr	Veh./hr	PCU/hr	Visitors/hr	Veh./hr	PCU/hr
Shuttle Bus	190	8	12	190	8	12
Car/taxi	6	2	2	6	2	2
Public Transport/Walk	4			10		
Total	200	10	14	200	10	14

Note : The shuttle bus trip is based on the 24-seat shuttle bus services
The car/taxi occupancy is based on average occupancy of 3.5 persons per vehicle.

The proposed columbarium development would general a total of 28 pcu's (14 in & 14 out) during the peak hour which will not cause any severe disruption to traffic on Hing Fu Street and its vicinity. In addition, the limit of not more than 200 visitors per hour to visit TKLY for worship as proposed by the Applicant in this application is obviously well within the holding capacity of the TKLY compound. Hence, by the adoption of the aforesaid traffic and crowd management strategies, the proposed columbarium will not cause any adverse effect to the area concerned during the Festival Period.

6.5 The shuttle bus services will be provided by TKLY to convey worshippers from MTR West Rail Siu Hong Station North PTI to TKLY site and vice versa. The intended shuttle bus routes, the distance between TKLY & MTR West Rail Siu Hong Station North PTI, the journey time, vehicle trips; and pick up and set down locations are highlighted below :-

(i) Routeing (circular) : Shuttle bus parking bay i/s TKLY > unnamed concrete slip road o/s TKLY > Hing Fu St roundabout > Hing Fu St > Hing Kwai St > Ming Kum Rd > Tsing Tin Rd > Tuen Mun Rd > Lam Tei Interchange > Siu Hong Stn North PTI general layby > Lam Tei Interchange > Tuen Mun Rd > Tsing Tin Rd > Ming Kum Rd > Hing

Kwai St > Hing Fu St > Hing Fu St roundabout > Unnamed concrete slip road o/s TKLY > shuttle bus parking bay i/s TKLY.

(ii) Distance : From TKLY to MTR Siu Hong Stn North PTI = **4km**
From MTR Siu Hong Stn North PTI to TKLY = **4.6km**

(iii) Journey time : From TK LY to MTR Siu Hong Stn North PTI
4km ÷ 50km/hr x 60 min = 4.8 min
From MTR Siu Hong Stn North PTI to TKLY
4.6km ÷ 50km/hr x 60 min = 5.5 min
According to the TIA, the assumed waiting time Equals to half of the cycle time at each signalized Junction :
J3 : Tsun Wen Rd/Ming Kum Rd/Hing Kuai St – 90 Seconds (1.5 minutes)
J8 : Tin King Rd/Ming Kum Rd – 90 seconds (1.5 Minutes)
J9 : Tsing Tin Rd/Ming Kum Rd – 145 seconds (2.4 minutes)
Total traveling time for a **circular trip =**
4.8 + 5.5 + (0.75 + 0.75 + 1.2) x 2 = 15.7 minutes
Therefore, the total journey time for a circular trip Including boarding and alighting times would be Around **30 minutes,** i.e. **2 round-trips per shuttle bus/hr**.

(iv) Accordingly 1 shuttle bus can run 2 circular trips w/i one hour bet. TKLY & MTR West Rail Siu Hong Stn North PTI, hence TKLY needs to provide **5 shuttle buses** in order to run around 10 trips/hour for the conveyance of **200 visitors/hr** to TKLY for worship.
Formula : **60 min ÷ 30 min = 2 trips/hr**
24-seat bus x 2 trips/hr = 48 visitors/hr (1 shuttle bus)
48 visitors x 5 vehs. = 240 visitors/hr

(v) Pick up/set down locations : (a) At the shuttle bus parking bay i/s TKLY
(b) At the general layby at MTR West Rail Siu Hong Stn North PTI (sketch at **Annex 'D'**)

7. Traffic and Public Transport Arrangement

TKLY is accessible via Ming Kum Street, Hing Kwai Street, Hing Fu Street and an unnamed concrete slip road linking with the Hing Fu Street cul-de-sac roundabout by the north west side of Po Tin Estate, Tuen Mun. During festive days worshippers resort to the use of public transport can take LRT to Tin King LRT Stop or buses/GMBs to Ming Kum Street o/s Po Tin Estate and then walk to TKLY through the aforesaid roads. The walking distance from these locations to TKLY is about 15 - 20 minutes.

7.1 Bus Routes : 58M, 58P, 58X, 258D, 258S, 258X, 260X, 960, 960A 960B, 960X & 961P

Green Mini-Bus Routes : 40, 44A, 44A1 & 44B

LRT Routes : 505, 507, 615 & 615P

7.2 The routes available to access TKLY are :-

1st route : Take the free shuttle buses provided by TKLY via advance E-booking
Routeing (circular) : Shuttle bus parking bay i/s TKLY > unnamed concrete footpath o/s TKLY > Hing Fu St roundabout > Hing Fu St > Hing Kwai St > Ming Kum Rd > Tsing Tin Rd > Tuen Mun Rd > Lam Tei Interchange > Siu Hong Stn North PTI general layby > Lam Tei Interchange > Tuen Mun Rd > Tsing Tin Rd > Ming Kum Rd > Hing Kwai St > Hing Fu St > Hing Fu St roundabout > Unnamed concrete footpath o/s TKLY > shuttle bus parking bay i/s TKLY.

2nd route : MTR (MTR Yuen Long Stn Exit 'G') >
LRT Route 615 at MTR Yuen Long LRT Stop >
LRT Route 615 stop at LRT Tin King Stop>
Walk along Ming Kum Rd western pavement towards north >
Walk along Hing Kwai St western pavement towards north >
Turn left onto the southern pavement of Hing Fu St & walk towards west to the Hing Fu St cul-de-sac roundabout >
Go up the unnamed concrete footpath linking with Hing Fu St cul-de-sac roundabout to reach TKLY

3rd route : By buses/GMBs to Po Tin PTI/bus stops on Ming Kum Rd o/s Po Tin Estate >
Walk along the aforesaid roads all the way to TKLY

7.3 A copy of the bus routes, green mini-bus routes & LRT routes is at **Annex 'A'**.

8. Special Traffic Arrangement for Tin Kwong Lun Yee, Tuen Mun

8.1 With a view to minimizing traffic impact at Ming Kum Road, Hing Kwai Street and Hing Fu Street, TKLY will be closed during Ching Ming and Chung Yeung Festival Days and 2 consecutive weekends before and after the Festival Day and the Applicant will evenly distribute and arrange worshippers to visit TKLY for worship over a period of 26 weekdays during the Festival Period and the non-Festival period nearest to the Festival Period so that an orderly and smooth worship can take place at TKLY without causing any severe traffic disruption in the vicinity of Po Tin Estate and its nearby road network. In addition, the Applicant will provide free circular shuttle bus services to convey worshippers from MTR West Rail Siu Hong Station North PTI to TKLY for worship during the 10 weekdays before and after the Festival Day (i.e. a total of 20 weekdays) and vice versa so that disruption to traffic is kept to the minimal. A series of measures will be implemented by TKLY as follows :-

(i) A **visit-by-appointment system** will be used whereby each batch of visitors will be arranged to reserve a place for the shuttle bus on a first-come first-serve basis in order to come to TKLY for worship according to a pre-arranged date and time slot arranged by TKLY so that a balanced control of visitors can be achieved. Worshippers will be contacted in advance by way of email/SMS/Whatsapp/phone about this pre-arranged time slot arrangement & the use of free shuttle bus services two months in advance prior to the Festival Period. Entry permits will be sent to respective niche purchasers via mail/email/Whatsapp for identifying their validity to use the free shuttle bus services and entry to TKLY for worship according to the pre-arranged date and time slot;

(ii) Subject to prevailing situation TKLY may elongate the opening hours of the site on festival days in order to diffuse worshippers, if necessary;

(iii) A new clause as per paragraph 5 bullet point 5 will be included in the future usage agreements for the columbarium niche buyers to comply with that no parking facilities be available for worshippers except for disabled/elderly and they are required to reserve the shuttle bus services provided by TKLY to arrive and depart the site concerned. Those minority that do not use the free shuttle bus services are encouraged to use public transport services. Worshippers also need to adhere to the admission control that may be implemented by TKLY on site and the house rules. Worshippers will be notified in advance prior to festive days that they need to adhere to the specifications written on the purchase agreements regarding the above and TKLY has the authority to deny access;

(iv) In addition, notices, emails and advertisements will be posed to inform public about the special traffic arrangements;

(v) TKLY will also put up directional signs at various key locations such as the pavement o/s LTR Tin King Stop, Po Tin PTI, Bus/GMB Stops at Ming Kum Road, the pavement of Hing Kwai Street and Hing Fu Street, Hing Fu Street cul-de-sac roundabout and the unnamed concrete slip road leading to the site to guide worshippers to the columbarium;

(vi) TKLY will also deploy sufficient staff/security guards/traffic wardens at Hing Fu Street and its roundabout to guide and assist worshippers to alight from cars or taxis and then guide them to go up the unnamed concrete slip road to reach TKLY, if necessary. Drivers of driven cars will be reminded on the spot not to park their cars illegally on Hing Fu Street so as to avoid causing traffic disruption; &

(vii) In the event that a large number of P/Cs and taxis convey worshippers to TKLY for worship via Hing Fu Street during the festive days, especially during the peak hour period, e.g. visitors fail to adhere to the visit-by-appointment system, the Applicant will deploy sufficient manpower to Hing Fu Street and its roundabout for traffic and crowd management and if necessary liaise with Police for the implementation of an emergency traffic plan on Hing Fu Street R/A and its vicinity for traffic and crowd management; and the emergency traffic plan will include the following measures, namely :-

(a) To set up pick-up/drop-off point at Hing Fu Street R/A near to the unnamed concrete slip road leading to TKLY for P/Cs and taxis to drop off worshippers thereat and then they will be guided by staff/ security personnel/traffic wardens to access TKLY via the unnamed concrete slip road. P/C drivers will be reminded by staff/security personnel/traffic wardens deployed thereat not to park their cars on Hing Fu Street illegally and to leave the scene promptly;

(b) If necessary, Police will be requested to clear all the illegal parking on E/B and W/B Hing Fu Street between the R/A and Ming Kum Road to facilitate in-coming vehicles to line up on W/B Hing Fu Street in order to approach the pick-up/drop-off point set up at Hing Fu Street R/A;

(c) Traffic Wardens employed by TKLY will be deployed at Hing Fu Street R/A to assist Police in regulating the movement of vehicles and to guide worshippers approaching TKLY. Traffic Wardens will also be deployed evenly along Hing Fu Street bet. the R/A and Ming Kum Road to assist Police in guiding vehicles'

movement along the Hing Fu Street;

(d) If the number of in-coming P/Cs and taxis onto Hing Fu Street become increased, e.g. during peak hour period, Police at scene will be requested to deploy duties to Hing Fu Street/Ming Kum Road junction for traffic control so as to ensure the least disruption is caused to nearby area, nevertheless, the occurrence of this situation is predicted to be remote;

(e) Sufficient security personnel/traffic wardens will also be deployed at Hing Fu Sreet R/A and along Hing Fu Street W/B pavement to regulate/guide visitors going to TKLY on foot;

(f) Traffic wardens will also be deployed to the vehicle accesses to Po Tin Estate on Hing Fu Street to observe the traffic situation thereat and to ensure the vehicle accesses are not blocked by any vehicles; &

(g) Directional signs showing the pick-up/drop-off point and the direction of line up of vehicles on Hing Fu Street R/A and Hing Fu Street W/B lane will be placed at appropriate locations along Hing Fu Street to guide vehicles and these directional signs will be retreated at the end of the festive operations.

8.2 Apart from implementing the shuttle bus services and the visit-by-appointment system, TKLY will also implement **admission control system** at its compound where staff and security guards will be deployed thereat to implement the system, in particular during the peak hour so that only a controllable number of worshippers can be released to go inside the columbarium halls for worship in according to the holding capacity of the columbarium halls. The following will be introduced, namely :-

(i) An admission control by way of **tidal flow system** using ropes or tapes to control/release the worshippers to access the columbarium halls at the 3 blocks will be adopted at the compound inside TKLY where a **holding area** will be set up thereat to allow worshippers to line up thereat waiting to be released into the respective columbarium halls for worship;

(ii) TKLY staff and security personnel deployed thereat will maintain close communication with the Command Post of TKLY to ensure a staggered/periodical release of worshippers to enter the columbarium halls for worship;

(iii) Staff/security personnel will also be deployed on the alley behind the columbarium blocks to guide departure visitors to the shuttle bus bays and to the main entrance ensuring no conflict between the arrival and departure visitors; &

(iv) Plastic barriers, cones and tapes will be used by the Applicant to set up the holding area at TKLY compound.

9. Police Presence

With the straight implementation of shuttle bus services provided by TKLY coupled with the visit-by-appointment system, admission control and various administrative and operational measures, it is anticipated that the worship at TKLY during festive days and non-festive days shall be a self-regulated event without the need of Police participation or intervention. In any case and as a matter of courtesy, the Applicant will inform Tuen Mun Police in advance prior to the commencement of festive seasons the expected numbers of attendance to TKLY during each day of the festive period so that Police can at their own disposal make suitable arrangement, if they deed necessary. To tackle with possible illegal parking on Hing Fu Street which may affect the vehicular accesses to Po Tin Estate, the Applicant will deploy security personnel at the scene to observe the traffic situation thereat and will inform Traffic Police NTN to attend scene to deal with illegal parking when there is such impending needs. Useful telephone contacts is at **Annex 'E'**.

10. Crowd Management Plan Execution

10.1 During the worshipping festivals a substantial number of worshippers will go to TKLY, Tuen Mun for worship, in particular when all the niches are sold and interred in future. In this scenario, it is expected that an increase in the number of worshippers will occur at TKLY during the festive period of Ching Ming/Chung Yeung Festivals and a special crowd management plan is considered necessary to be implemented inside TKLY and its nearby area to ensure the safety of worshippers and the smooth worshipping operation inside the columbarium concerned. In the long term, there might be a gradual decrease in the number of worshippers going to TKLY for worship during festive days, yet the introduction of the aforesaid special crowd management plan should not be neglected on each occasion.

10.2 In addition to the administrative measures that will be implemented by the Applicant as stipulated in this management plan and to ensure a safe and orderly worship inside TKLY, a crowd management plan will be introduced by TKLY to control only a controllable number of worshippers enter the columbarium halls for worship in a safe and orderly fashion. The management of TKLY will supervise the operation in the following manner, namely :-

(i) Firstly, TKLY management will implement the **visit-by-appointment system** through E-booking, i.e. by way of phone/email/SMS/ Whatsapp & newsletters. Staff of TKLY will contact the niche purchasers and inform them with the following information for processing the booking, namely :-

(a) The 26 weekdays period that span across the festive period and non-festive period, [i.e. 20 days within the Festival Period-that is 10 weekdays preceding the Festival Day and 10 weekdays after the Festival Day and 6 days during the non-Festival Period nearest to the Festival Day] where worship will be booked via visit-by-appointment system;

(b) Ask the niche purchasers to provide the exact number of visitors including the number of accompanies;

(c) Ask them to reserve places for the free shuttle bus services & remind them to adhere to the clause and condition in the sale agreement to resort to the use of shuttle bus service and then arrange booking for them;

(d) Inform them the pick-up point, which will be at the general layby of the MTR West Rail Siu Hong Station North PTI where TKLY staff & security guards will be available at the layby to check their validity before allowing them to get on board the shuttle bus & that shuttle bus will also be available at TKLY site to convey them back to Siu Hong Station PTI for dispersal after the worship;

(e) A pre-arranged day & time slot will be allocated to each of the niche purchasers & his/her accompanies through E-booking (the time slot for the worship i/s TKLY columbarium halls will normally not more than 1 hour);

(f) Entry permits with the date & time slot chosen printed on them will be mailed/emailed/Whatsapp to the niche purchasers & the latter has to present the entry permits to staff/security guards stationed at Siu Hong Stn North PTI general layby for checking before they are allowed to take the free shuttle bus services to TKLY;

(g) Niche purchasers will be informed that TKLY will keep record for the aforesaid visit-by-appointment for ad hoc checking, if necessary and if niche purchasers & visitors fail to comply with the arranged appointment, unless with excusable reason(s), TKLY has the right to deny access;

(h) For disabled/elderly driven cars, the niche purchasers need to book in advance with TKLY for using the car parking spaces (each parking not more than 1 hour) & TKLY will issue car park labels to niche purchasers either by mail/email/Whatsapp so as to identify their authenticity on site. Niche purchasers need to present the car park labels to staff/security guards deployed for traffic/crowd management at the foot of the concrete slip road/Hing Fu Street cul-de-sac R/A for checking before they are allowed to enter TKLY site; &

(i) Only vehicles carrying disabled/elderly with the issued car park labels will be allowed to access the unnamed concrete slip road heading for TKLY, other visitors arrive by cars need to stop at the roundabout for drop-off and the visitors will then be guided to walk up the unnamed concrete slip road heading for TKLY. Appropriate directional sign with suitable notice attached indicating the aforesaid arrangement will be placed at the aforesaid roundabout/unnamed concrete slip road leading to TKLY to alert/remind visitors.

(ii) Secondly, TKLY will introduce **admission control** over in-coming visitors, including visitors using the free shuttle bus services and those on foot to enter TKLY. A **holding area** will be set up at the large compound in front of the columbarium blocks to hold up the in-coming worshippers. After debus from the shuttle buses at the shuttle bus bay inside TKLY and/or those enter TKLY via the main entrance on foot, they will be guided by staff/ security guards to enter the holding area where they will be arranged to line up in 3 rows, 1 row for 1 columbarium block, and then the worshippers will be released periodically to enter the respective columbarium blocks for worship by way of **tidal flow system** in an orderly and staggered manner depending on the number of worshippers inside the 3 columbarium blocks so that no overflown of visitors inside the columbarium halls will occur. Staff/security guards will be deployed at the holding area to monitor/supervise the release of visitors. Again, staff/security guards will be deployed inside the columbarium halls and outside the 3 columbarium blocks respectively to monitor/supervise the in-flow /out-flow of worshippers. They will use walkie talkies for communication in order to ensure an orderly release of worshippers;

(iii) Worshippers finished the worship on the 1/F of the 3 columbarium blocks and the G/F of columbarium Block 3 will be guided to use the rear exits and ramps to go down to the wide alley behind the 3 columbarium blocks to move south towards the departure area immediately behind the shuttle bus bay where they will be arranged by staff/security guards to wait thereat waiting to get on board shuttle bus to depart TKLY. The leaving worshippers from G/F of the 3 columbarium blocks will be guided by staff/security guards at the compound to head south for the aforesaid departure area waiting for taking the shuttle buses. This arrangement will ensure no conflict between arriving and departing visitors so as to ensure an orderly arrival and departure of worshippers;

(iv) TKLY staff/security guards will be deployed at the main entrance,

the holding area, the shuttle bus bay, the departure area behind the shuttle bus bay, the open area in front of the car parking spaces, inside and outside the columbarium blocks and the Hing Fu Street cul-de-sac roundabout to monitor the arrival/departure of worshippers;

(v) Plastic barriers, cones and tapes will be placed at the compound to delineate the holding area, the P/C drop-off area & the arrival/departure routes so that no conflict will occur between waiting worshippers and the arriving/departing disabled/elderly driven cars and the arrival/departure crowd;

(vi) Ad hoc worshippers coming to TKLY for worship without advance E-booking and/or late comers will be told and arranged to wait at the holding area awaiting their turns to enter the respective columbarium halls for worship as priority will be given to those with E-booking;

(vii) Notice attached on directional signs erected at the holding area will inform ad hoc visitors/late comers about the arrangement as stated in item (vi) above;

(viii) Directional signs will be placed inside all columbarium halls to indicate clearly to worshippers the exits of the respective columbarium halls where worshippers can disperse through these exits in a safe and orderly manner and directional signs indicating the exit of TKLY site will also be placed at appropriate locations within the site to guide visitors on foot to leave the site via the main exit; &

(ix) The Applicant will try her very best to arrange the visits to the columbarium by way of visit-by-appointment system to prevent overflown situation to occur at TKLY. The limit of allowing not more than 200 visitors per hour to visit TKLY during each day of visit can ensure that there will be no overflown of visitors onto the unnamed concrete slip road outside TKLY, nevertheless, should there be any over-spilling of visitors at TKLY, in particular during the peak hour, visitors will be arranged to line up in single file along the unnamed concrete slip road leading to TKLY waiting to be released into TKLY for worship. Sufficient staff/security guards will be deployed along the access road to monitor/supervise the arriving and departing visitors and to use 'Stop & Go' method to regulate the incoming/outgoing visitors and the incoming/outgoing shuttle bus services and P/Cs and taxis so that there will not be any conflict between crowd and vehicles movement and to ensure the safety of all.

10.3 The Applicant and her manager of TKLY should be vigilant for this kind of

situation and maintain close liaison with staff/security guards deployed at different key locations inside/outside TKLY for the implementation of the aforesaid arrangement(s). Staff/security guards deployed at the **holding area** will explain to the worshippers the reason for making the tidal flow releasing method in order to ensure a safe and orderly release of people into the respective columbarium blocks periodically. Directional signs with notice specifying the holding area and tidal flow system will also be placed at the compound to notify the worshippers. **Moreover, the Applicant will ensure that visitors be informed well in advance before the commencement of the festive days the possibilities of executing tidal flow system on site for special crowd management during the above-mentioned days of the Festive period.**

10.4 All staff/security guards/traffic wardens will be equipped with walkie talkies for internal communication.

10.5 Should emergency vehicles, such as ambulance(s), need to access TKLY to deal with any emergency situation concerning worshippers, e.g. sick person case(s), the Command Post will inform staff/security guards/traffic wardens deployed within the area about approaching emergency vehicles and if necessary temporarily stopped the tidal flow system, the shuttle bus services, other car movement and help to retreat visitors to the roadside on the unnamed concrete slip road leading to TKLY to facilitate passage of emergency vehicles and offer assistance to emergency services personnel.

10.6 The Applicant will arrange clear directional signs be placed at suitable locations inside TKLY to guide the arrival and departure worshippers. Directional signs will also be placed at the following locations to guide visitors to access TKLY, namely :-

(i) Pavement o/s Tin King LRT Stop;
(ii) Western pavement of Ming Kum Road o/s Po Tin PTI and the bus/GMB Stops on Ming Kum Road o/s Po Tin Estate;
(iii) Hing Kwai Street western pavement towards Hing Fu Street;
(iv) Western Pavement of Hing Kwai Street/Hing Fu Street;
(v) Hing Fu Street cul-de-sac roundabout; &
(vi) Along Hing Fu Street W/B pavement.

11. Supply & Distribution of Manpower of Tin Kwong Lun Yee Staff/Security Guards/Traffic Wardens for Both Traffic and Crowd Management

As per **Annex 'B'.**

12. Specific Duties of Tin Kwong Lun Yee Staff/Security Guards/Traffic Wardens for Both Traffic & Crowd Management

As per **Annex 'C'**

13. Security Management

The Applicant undertakes to ensure that sufficient security measures are implemented for TKLY. Aerial overhead surveillance cameras will be installed at the main entrance, mounted on the wall of the 3 columbarium blocks and adequate CCTV cameras will also be installed at vantage locations within TKLY to cover the whole site including the columbarium halls so as to monitor the activities within the site and the CCTV monitor panel with 24 hours recording function will be placed inside the Admin Office, G/F of columbarium block 2 which will be manned by TKLY staff during office hours, in particular during the 9 days period including the main day of either Ching Ming or Chung Yeung Festivals. TKLY closes for business at 1700 hours daily and the 24 hours CCTV with recording system will continue to be turned on to monitor/record activities inside it. The whole perimeter of TKLY is bounded by wall and retaining wall and the Applicant will employ 2 night shift security guards to perform 12 hours night shift duties inside TKLY to prevent trespassing and ensure tight security.

14. Inclement Weather

In the event of inclement weather, such as heavy rain, during the course of the operation, TKLY will ensure that those worshippers remain inside TKLY to avoid the rain are remained in safe locations and those queue up at the holding area will retreat to indoor to avoid the rain and the tidal flow system, if implemented, will cease.

15. Command Post (CP)(指揮中心)

The Applicant and her manager will operate a CP in the Admin Office, G/F of columbarium block 2. It will be commanded by the Applicant and her manager or the senior staff in their absence during the festive days.

16. Location Map of Tin Kwong Lun Yee and Route Map

The location map of TKLY and route map are at **Annex 'D'**.

17. Pictures of Tin Kwong Lun Yee, its Columbarium Halls and Emergency Evacuation Routes

As per **Annex 'F'.**

18. Manpower Deployment

18.1 TKLY private columbarium will employ a manager and sufficient staff to manage the site, in particular for the festive operation(s).

18.2 The Applicant will direct the manager to provide sufficient manpower to meet the daily operational need of TKLY and staff will be deployed on a rotation basis, including daily cleaning, overall administration for the site, provide customer service and guiding to visitors, employ professionals and workers for repair and maintenance of TKLY facilities and buildings. Provide fire safety and security measures for the whole site. First-aid box is available at the Admin Office in case of need. Provide traffic/crowd management measures during Ching Ming and Chung Yeung Festivals. **Manpower deployment and responsibilities of staff, security personnel and traffic wardens in details for Ching Ming and Chung Yeung Festivals are at Annex 'B' & 'C'.**

18.3 The Applicant undertakes to provide the following information to the Licensing Board/relevant authorities, namely :-

- Organization chart of future TKLY working personnel, their number, ranking and job charters, area of responsibilities in relation to the columbarium and other ancillary facilities.
- The details of future employed manager.
- To provide fire prevention measures training to staff of TKLY in future, such as to arrange staff to attend first-aid courses provided by Auxiliary Medical Service (AMS) (**醫療輔助隊**) or to employ AMS personnel to station inside TKLY in order to provide medical services to worshippers during Ching Ming and Chung Yeung Festivals.
- Normally, no repair and maintenance work will be carried out during Ching Ming or Chung Yeung Festivals but the Applicant undertakes to employ professionals and workers to standby inside TKLY and to undertake urgent repair and maintenance work during the peak grave sweeping days if there is such an impending need.
- In the future management of TKLY, the management mode will be as follows :-
  - (i) Staff will be assigned with their work according to their job charters and they will be supervised by the manager and in his/her absence the most senior staff presence will take over the responsibilities; &
  - (ii) Staff will be briefed on a need-to-know basis regarding the daily running of TKLY, the supervision/running of all the facilities and services to be provided to members of the public. The Applicant will ensure all staff know their own roles and

duties and ad hoc meetings will be convened by the Applicant or her manager to discuss and evaluate current issues regarding the quality running of TKLY. The Applicant will ensure the manager and all staff are conversant will the Management Plan and Contingency Plan of TKLY so that they can take immediate and appropriate action in dealing with different types of incidents that may occur in relation with TKLY.

19. Contingency Plan for Fire or Other Emergency Situations To Be Executed by Tin Kwong Lun Yee in compliance with Section 97(f) of the Private Columbaria Ordinance Cap 630

19.1 In accordance with Section 97(f) of the Private Columbaria Ordinance, Cap 630, the Applicant of TKLY is required to submit a 'Contingency Plan in the event of fire or other emergency situations', in addition to other management plans, to the Licensing Board for scrutiny in relation to her application of Columbarium Licence for TKLY.

19.2 In relation to the Applicant's application to the Licensing Board for a Columbarium Licence, the following contingency plan is hence compiled in compliance with the aforesaid Ordinance in order to enhance the successfulness of the application, namely :-.

(a) **Fire Prevention Execution**

The Applicant will ensure the adoption of all fire prevention measures as per Fire Service Department requirement.

(b) **Emergency Evacuation Plan**

An emergency evacuation plan will be prepared by the manager of TKLY as directed by the Applicant for TKLY site and its columbarium halls and all staff will be briefed to be conversant with the plan so that they can assist worshippers in quick evacuation in case of emergency. The followings are the emergency procedures to be adopted by TKLY, namely :-

- In the event of fire, alert others by shouting "Fire" & report the fire by dialing '999' and give the name & address of TKLY to Police & FSD.
- If it is safe to do so, remove combustibles away from fire.
- When the magnitude of fire is small & it is safe to do so, use fire extinguishers to put out the fire. If the fire is large or uncontrollable, immediate evacuate all visitors out of the fire compartment/floor.

- After all personnel have been evacuated, close the door of fire compartment/floor and evacuate all visitors to the **designated assembly point.**
- In the event of emergency during festive days manpower deployed at key locations at TKLY will assist patrons in evacuation to the **designated assembly point set at the Basketball Court by the east side of Hing Fu Street cul-de-sac roundabout.**
- In emergency situation(s) staff/security guards deployed inside and outside the 6 columbarium halls of TKLY will immediately guide/direct worshippers to leave the respective columbarium halls to the compound and leave via the main entrance of TKLY.
- Leave TKLY via the unnamed concrete slip road to go downhill to Hing Fu Street cul-de-sac roundabout and to the designated assembly point set at the Basketball Court, Hing Fu Street.
- Staff in the Admin Office will exit the office and leave the site as quickly as possible.
- All shuttle buses stationed at the shuttle bus bay will be driven down to Hing Fu Street for temporary parking.
- All visitors' cars parked w/i TKLY will be asked to drive the cars down to Hing Fu Street as quickly as possible.
- The Applicant will ensure the emergency evacuation route within TKLY is free of obstruction at all times.
- The Applicant will ensure that all her staff deployed will be conversant with the Management Plan & the Contingency Plan, all evacuation routes from the 3 columbarium blocks to the designated assembly point, and the locations and operation of the fire extinguishers.
- The Applicant will liaise with Police/FSD firemen deployed at scene for providing information and assistance.

(C) **<u>Fire Service Installations/Fire fighting Equipment/Storage of Joss Materials</u>**

- The Applicant will ensure all fire service installations and equipment provided for TKLY including the 6 columbarium halls will be maintained in efficient working order.
- The Applicant will employ a Registered Fire Service Installation (FSI) Contractor for all maintenance, alterations and additions for TKLY including the columbarium.

- The Applicant will employ the Registered FSI Contractor to prepare the **fire escape route plans** for TKLY including the columbarium halls.
- The Registered FSI Contractor shall issue Certificate(s) of Fire Service Installations and Equipment (FS 251) to the Applicant with copies forwarded to the Director of Fire Services via the respective Regional Office of the Licensing and Certification Command within 14 days after completion of works.
- A Certificate of Compliance (FSI⁄314A or FSI⁄314B as appropriate) will be submitted by the responsible Registered FSI Contractor to the Director of Fire Services via the respective Regional Office of the Licensing and Certification Command for the alteration and addition works.
- Portable firefighting equipment of the approved type will be provided by the Applicant for TKLY, namely :-
  (i) Six x 9L water type fire extinguisher(s) at the columbarium halls; &
  (ii) Six x 4.5kg CO2 gas type fire extinguisher(s) at the columbarium halls.

- The Applicant will also ensure the implementation of the following measures, namely :-
  (i) All fire extinguishers are in good working condition, be kept clear from any obstruction, clearly indicated as regard to their locations and methods of operation and be inspected by Registered FSI Contractor at least once every twelve months;
  (ii) Emergency lighting shall be provided for TKLY including the columbarium halls;
  (iii) All exits will be suitably indicated by illuminated signs and if the exit are out of sight to any location within TKLY including the columbarium halls, suitable directional signs in the same dimensions as the exit signs shall be provided to assist patron to identify the exits in the event of an emergency;
  (iv) All combustible materials used as altars, false ceilings, partitions or wall furnishings inside the columbarium halls should conform with FSD required standard;
  (v) All means of escape routes will be kept free from

obstruction;

(vi) Access route will be provided for FSD to reach the columbarium;

(vii) A suitable store room or cabinet should be provided for the storage of joss materials, if any (there will be no burning of incense materials i/s TKLY permitted, hence, there will not be any store room built to store joss materials by TKLY);

(viii) No kerosene & lamp oil will be kept inside TKLY as no burning of joss sticks and incense materials are permitted inside TKLY site; &

(ix) No storage of any dangerous goods exceeding the exempt quantity in accordance with the Dangerous Goods (General) Regulations, Cap 295B.

(d) To further adhere to the FSD fire prevention requirement, the Applicant undertakes to appoint the manager as the **Fire Security Manager** (FSM) for TKLY.

19.3 The 6 columbarium halls situated within TKLY are equipped with fire extinguishers. The Applicant undertakes to employ fire contractor to conduct evaluation of fire precaution measures for TKLY including the columbarium halls in order to upgrade the fire prevention measures that need to be put in place in order to comply with the FSD fire regulations as well as to comply with the Application Guidelines regarding fire prevention.

19.4 The Applicant undertakes to install CCTV system inside TKLY to monitor the activities inside the site, especially for activities during festive days. The CCTV monitor panel with 24-hour recording function will be installed in the Admin Office on the G/F of columbarium block 2 for staff to monitor the activities inside TKLY.

19.5 The Applicant undertakes to set up house rules and ensure no burning of incense materials be carried out inside the columbarium halls as well as inside the site during the course of worship. Worshippers will be seriously reminded about this rule.

19.6 The Applicant will ensure that fire equipment such as fire extinguishers, in good working order, be placed at appropriate and easy-to-reach locations at all the columbarium halls and other suitable places within TKLY to serve as fire prevention measures.

19.7 The Applicant will direct the manager to set up a fire prevention team in dealing with the break out of fire. **Fire escape route floor plans** concerning escape routes to be prepared by the registered fire contractor concerned will also be affixed at prominent locations within TKLY including the columbarium halls, serving as a clear guide for fire escape. The fire escape routes will be checked periodically to ensure no obstruction is caused to the routes, in particular prior to the commencement of the festive seasons.

19.8 The Applicant will ensure that during festive days staff/security guards on duty are equipped with walkie talkie for easy communication.

19.9 The manager will set up a command post (CP) at the Admin Office in order to monitor the worshipping operations.

19.10 AMS (**醫療輔助隊**) personnel will be employed to station inside TKLY to provide first-aid services to worshippers. First-aid box is available inside the Admin Office.

19.11 The Applicant undertakes to adhere to the Fire Safety Requirements for Private Columbaria as stipulated by the Fire Service Department (FSD) which includes the Guideline for 'Fire Safety Plan' of Private Columbaria (PC), Fire Safety Instruction – for PC staff and Information required in Fire/Emergency Evacuation Route Plan'.

Fire Security Manager (FSM)

19.12 The manager of TKLY will be appointed as the FSM and he/she is responsible for the following responsibilities, viz :-

- Maintain up-to-date list of Fire Prevention Team (to be reviewed annually) and to liaise with Fire Protection Command of the FSD to arrange training in fire-fighting and fire prevention for the team e.g. the proper use of fire extinguishers
- To liaise with the registered fire contractor concerned to conduct periodical check regarding fire prevention measures adopted by TKLY
- Liaise with the registered fire contractor concerned to ensure fire escape route plans for TKLY are well prepared and to display them at appropriate locations within the site
- To action in the event of fire
- At the end of working period ensure all electrical appliances are switched off and/or unplugged as necessary
- Check that inflammable material is properly stored, if any
- Ensure fire prevention measures are well in place within TKLY
- To check fire preventing equipment in good working order regularly

and escape routes are not obstructed, especially prior to the festive days

- Arrange fire drill to be carried every six month
- Brief staff/security guards about fire prevention/fire-fighting and the locations of the fire extinguishers before the commencement of every worshipping season.

Immediate Action on Discovery of Fire

19.13 The person who discovers the fire will :-

- Raise the Alarm by shouting “FIRE” “FOH CHUK (火燭)” .
- Take all possible action to extinguish or contain the fire

  N.B. DO NOT USE WATER OR SODA ACID EXINGUISHERS AGAINST ELECTRICAL FIRES UNTIL BEING TOLD THAT THE ELECTRICAL CURRENT HAS BEEN SWITCHED OFF BY THE PERSON WHO DID SO.
- Ensure that the FSM is immediately informed of the outbreak of fire. The responsibility to request for the assistance of FSD, through the ‘999’ system, will rest with the FSM, except in his/her absence, the most senior staff present at the scene of fire takes over the responsibility.

Action by FSO

19.14 In the event of fire, the FSM will take the following actions, viz :-

- Ensure to dial “999” to call for Police and FSD assistance.
- To dispatch all available staff, fire prevention team and security personnel to the scene of fire to assist in fire-fighting operations.
- Instruct staff/security guards to arrange immediate and orderly evacuation of worshippers through the escape routes and leave TKLY through the main entrance and to leave quickly downhill via the unnamed concrete slip road to reach Hing Fu Street cul-de-sac roundabout and then to the **designated assembly point** set at the Basketball Court located by the east side of the roundabout.
- Arrange the air-conditioning system of the 3 columbarium blocks to be switched off, if any.

Action at the Scene of Fire

19.15 Under the command of FSM present at the scene of fire, the fire prevention team, remaining staff and security guards are to :-

- Take all possible action to extinguish or contain the fire but safety be the priority.
- Check if any persons are trapped by the fire within the columbarium halls and office rooms and if necessary try to rescue them.
- Remove all casualties from the scene of fire to safe place for

immediate medical treatment to be provided by AMS personnel & ambulance be called immediately.

- TKLY staff will try their best to close all windows and doors in the vicinity of the fire and switch off fan and/or room air-conditioning units.
- Remove all inflammable material, if any.
- FSO to delegate a security guard to meet FSD personnel at the main entrance of TKLY.
- FSO to ensure security guards are deployed to the unnamed concrete slip road and Hing Fu Street cul-de-sac for crowd management.
- If the fire is of a serious nature and/or more than one fire has broken out and that danger is imminent, all persons including worshippers, TKLY staff and security guards will be immediately evacuated from the scene of fire to the designated assembly point set at the Basketball Court, east of Hing Fu Street cul-de-sac.
- FSO is to liaise with Police deployed at the scene for crowd management and to arrange a quick evacuation and orderly dispersal of worshippers away from the fire scene to the aforesaid designated assembly point.
- FSO to liaise with Police and the senior FSD officer attending the fire to ensure all aware of the prevailing danger.

Escape Routes

19.16 The escape routes for worshippers at the 6 Columbarium Halls are :-

- For the 3 columbarium halls located on the G/F of the 3 columbarium blocks, the worshippers will be guided by staff and security guards to leave the respective columbarium halls via the entrances of the columbarium halls to the compound and then retreat south to the main entrance of TKLY, then go downhill via the unnamed concrete slip road to the designated assembly point set at the Basketball Court, east of Hing Fu Street cul-de-sac roundabout.
- Worshippers inside the 3 columbarium halls on the 1/F of the 3 columbarium blocks will be guided/directed by staff/security guards to go down staircases/ramps to the entrance of each columbarium block and to the rear alley behind the columbarium blocks and then disperse towards south to the main entrance of TKLY. Then go downhill via the unnamed concrete slip road to the assembly point located at the Basketball Court, east of Hing Fu Street cul-de-sac roundabout.
- Worshippers at the holding area will immediately be directed to move south towards the main entrance of TKLY and proceed downhill via the unnamed concrete slip road to the aforesaid designated assembly point.

- For the Admin Office and other rooms located inside TKLY, those inside will immediately proceed to the compound and join with other dispersal groups to leave TKLY via the main entrance and go to the aforesaid designated assembly point for assemble.
- Shuttle buses parked at the shuttle bus bay will be driven away by drivers concerned and park the buses temporary at Hing Fu Street awaiting for further order from the Applicant.
- Car owners will as far as possible be informed to drive away their cars down to Hing Fu Street for temporary parking or be directed to drive away after taking back their disabled/elderly.

Removal of Important Documents

19.17 When the severity of the fire is known, removal of important documents placed inside the Admin Office to a safe place such as to the assembly point at Hing Fu Street may be considered. The FSM will direct his/her staff to take such action, if possible and to take care of necessary items.

Fuse Boxes and Fire Fighting Equipment

19.18 It is imperative for the FSM to brief staff to remember that the electric current must be switched off at the fuse box controlling electricity supply to the area of the fire before any attempt is made to extinguish a serious fire or one involving electrical apparatus. The staff must be well aware of the locations of fuse boxes and fire-fighting equipment.

Action During Other Emergency Situations

Action in Person Collapsed, Sick Person and Person Accidental Injured Cases

19.19 Person collapsed or sick person cases :-

- FSM, relevant staff and/or security guards to attend the scene immediate and assess the situation
- Directive be given to remove the person collapsed or sick person to a shaded & spacious area for a rest and call for ambulance
- If first-aid treatment is needed, those who know first-aid will attend to the sick person concerned and AMS personnel stationed inside TKLY will be called to the scene to attend to the sick person.
- Inform CP to call for ambulance, if immediate need is necessary
- Ensure the person collapsed or sick person is escorted to hospital by family members/Police, if possible
- FSO is to ensure security guards continue with their crowd management duties in order to ensure no panic from other worshippers

19.20 Person accidental injured cases :-

- Attend the scene immediate and assess the situation

- Depend on the seriousness of the injuries, do not move the injured
- Inform CP to call for ambulance, if necessary
- Cordon off and contain the scene to ensure no further incidents to occur
- Ensure the injured is escorted to hospital by family members/Police, if possible

Action in Landslide or Building Collapse Cases

19.21 Landslide or building collapse cases :-

- Attend the scene immediate and assess the situation
- Inform the CP and conduct rescue and attend to injured
- CP is to dial "999" to call for Police and FSD and ambulance to attend scene
- If the situation is serious, try as far as possible remove the injured to a safe place waiting for the arrival of ambulance
- Conduct evacuation immediate and tell those uninjured to leave TKLY via the main entrance, unnamed concrete slip road down to the designated assembly point as quickly as possible
- Try to obtain information from the Police regarding relevant Government Department staff to attend scene to evaluate the damaged situation
- FSO to liaise with the senior FSD officer present at the scene of rescue in order to obtain relevant and fresh information
- Try to identify the death, if any and the injured and next action is to inform family members about the incident
- In this type of case, the Application is to ensure that any retaining walls, if any, close to the precinct of TKLY are well maintained in good condition

Nature & Handling of Emergency Situations

19.22 Emergency situations are by no means exhaustive and those common situations are highlighted in the above paragraphs. TKLY staff and security personnel involved in festive operations need to be well trained for handling imminent situations that require prompt attention and be alert at all times when conducting the operations and be prepared to handle emergency situations at short notice. To equip themselves with sufficient knowledge in dealing with sudden incidents, in particular during festive days and to ensure that they comply with the Private Columbaria Ordinance/Application Guidelines.

Useful Telephone Contacts of FSD

19.23 Useful telephone contacts of FSD is at **Annex 'E'**.

20. Measures to ensure Compliance with Licensing Conditions, Guidelines and Code of Practice Stipulated or Issued by the PCLB

20.1 At present, there are only 8 occupied niches inside TKLY and the Applicant use appointment system to arrange worshippers to conduct the worship during festive days. To enhance the successfulness of the application for the columbarium licence and in future when additional niches are permitted to be sold and interred, the Applicant undertakes to implement adequate administrative measures in compliance of the PC Ord, Cap 630 and the application guidelines issued by relevant authorities. To ensure easy control and safety of worshippers, a visit-by-appointment system via phone/Whatsapp/email/SMS/ newsletters for booking the worshipping visits will be introduced including E-booking of the free shuttle bus services across the whole festive period (a total of 20 weekdays). This admission control by way of visit-by-appointment system will be strictly adhered to so as to ensure the smooth running of the festive events. The specific time slot visits' record with details of the niche purchasers, number of their accompanies, the time-in and time-out log & used of free shuttle bus services will be recorded and be kept in the Admin Office of TKLY for ad hoc checking during festive days, if necessary. TKLY will adhere strictly to the visit-by-appointment system & the distribution of visitors to respective columbarium halls by way of tidal flow system so that each columbarium hall will not exceed the permitted capacity at any one time. Signs indicating the holding capacities of each columbarium hall will be affixed at prominent location of each columbarium hall for the notice of visitors and such signs will be maintained in good conditions.

20.2 The Applicant will also provide information to worshippers regarding details of the special traffic/crowd management measures that may be implemented by TKLY during the festive period which span across Ching Ming or Chung Yeung Festivals and any change that might be made to such an arrangement. Signage will also be displayed inside TKLY to remind visitors to follow the house rules during festive days. Directional signs will also be placed at suitable locations inside/outside TKLY to guide the incoming/outgoing worshippers.

20.3 To employ a professional security company so as to provide sufficient security personnel and traffic wardens to assist TKLY staff to implement traffic/crowd management measures during Ching Ming and Chung Yeung Festivals.

20.4 Staff, security personnel and traffic wardens deployed for the operation

will be equipped with walkie talkie for internal communication so as to enhance the efficiency of the festive operation(s).

20.5 The Applicant undertakes to direct the manager to set up a Command Post (CP) at the Admin Office, G/F of columbarium block 2 to monitor and cover the operation(s) during the festival days.

20.6 To implement adequate security measures to ensure the safety of worshippers as well as the columbarium halls and the whole TKLY area. CCTV and Aerial Overhead Surveillance Cameras will be installed inside TKLY to monitor the worshipping activities and the deployment of adequate security personnel to cover the operation(s). Broadcasting system will also be installed inside TKLY to broadcast message to visitors, e.g. the in-flow of visitors arrangement and the staggered release of visitors into respective columbarium halls for worship, if situations dictate.

20.7 No burning of incense materials inside the respective columbarium halls and inside the site will be permitted and worshippers will be reminded about this rule well in advance prior to the festive days. Signs with 'No Burning of Incense Materials' will be affixed at prominent locations inside the columbarium buildings to remind visitors.

20.8 The Applicant will ensure the quick implementation of contingency plan in case of fire or other emergency situations.

20.9 To employ Auxiliary Medical Service (AMS) (**醫療輔助隊**) personnel to station inside TKLY for the provision of medical service to worshippers during the festive days.

20.10 The Applicant undertakes to direct the manager to set up plastic mills barriers, cordon tapes and cones at the compound of TKLY to set up the holding area and to delineate the in-flow and out-flow routes of worshippers. To deploy staff/security guards to direct the parking of cars, which carry disabled/elderly into respective car parking spaces and the parking of shuttle buses into the shuttle bus bay; and to assist the debus of passengers from cars/shuttle buses.

20.11 The Applicant undertakes to inform niche purchasers that no parking facilities will be provided by TKLY during the festive periods except for disabled/elderly and they need to book the parking via advance E-booking.

20.12 Worshippers will be reminded to adhere to the use of free shuttle bus services provided by TKLY to access and depart the site and that advance

booking via E-booking is required.

20.13 Those minority worshippers who do not use the free shuttle bus services are strongly encouraged to use public transport to access TKLY in order to minimize traffic impact in the vicinity of TKLY.

20.14 In order to improve the condition of the unnamed concrete slip road leading to TKLY, the Applicant proposed to widen the road to provide a 1.5m wide footpath passage for worshippers on foot to and from TKLY; and that there are adequate road width for the travelling of the shuttle buses. Two passing bays along the road will also be built to enhance the smooth running of the shuttle bus services, sketch of the proposed road widening is at **Annex 'D'.**

20.15 TKLY will affix notice at the main entrance informing visitors about the operation hours of TKLY during the whole festive period (a total of 26 days, i.e. the 20 weekdays within the Festival Period and the 6 days within the non-Festival Period nearest to the Festival Day).

20.16 TKLY will affix at the entrance of each columbarium hall floor plan indicating to the visitors the method of crowd management inside the site including visitors' flow, direction of flow, waiting & line up area(s)/restricted area, staff static posts, AMS post & escape route plans & assembly point for the notice of visitors.

20.17 TKLY will ensure that notice with the holding capacity of each columbarium hall, in English & Chinese, is affixed at prominent location at each columbarium hall and to ensure that the notices are well maintained for the information of visitors.

20.18 TKLY will ensure that cigarette smoking is not permitted inside the columbarium halls with 'No Smoking' signs affixed at prominent locations.

20.19 TKLY will also provide custody services for bulk belonging bring by the visitors, if necessary.

20.20 At any time according to the volume of visitors implement effective management plan to provide traffic/crowd movement management to ensure safety and orderly worshipping activities inside TKLY.

20.21 To display at prominent location(s) within TKLY the name & telephone number of the staff, who handles enquiries & complaints in relation to TKLY and worshipping activities.

20.22 TKLY will keep record of staff training including contents of the training materials, date of training & names of staff participated in the training and will provide information on the request of the relevant Columbarium Office.

21. Handling of Complaints

To comply with the Private Columbarium Ordinance and the Application Guidelines, the Applicant undertakes to implement a complaint mechanism to handle all complaints in relation to TKLY, namely :-

- Set up a complaint mechanism to deal with all complaints regarding the management and service to be provided by TKLY. The manager or in his/her absence, the most senior officer, will be the overall in-charge and decision maker for all the complaints received. An admin staff will be appointed as complaint handler for all the complaints in relation to TKLY.
- All complaint(s) will be recorded in computer and will be divided into different categories for easy handlings and data processing.
- The complaint handler will be assigned to input information of the complaints in the computer for subsequent handling and investigation.
- The complaint handler will be assigned as investigator for handling complaints and he/she will be responsible for contacting the complainants for enquiries and investigation of the complaints.
- Channel for receiving complaints – staff of TKLY on receiving a complaint will report it to the complaint handler of Admin Office and details of the complaint will be recorded in the computer including the nature, date & time of the complaint, details of the complainant and the complaint for follow-up action and subsequent reply.
- A performance pledge will be set up regarding period of investigation and the period of response to the complaint. Normally, reply to the complainant will be provided within one month, unless in urgent situation where the reply will be provided within 7 working days or as soon as possible.
- If there is a need to take remedial action, the complaint handler will report the nature/suggestions to the manager and the latter will refer them to the Applicant, who will then direct what kind of action, if appropriate, to be taken as soon as possible in order to maintain/upgrade the quality services provided by TKLY.

22. Financial Plan

The financial plan will be enclosed in a separate envelope which has been marked "Annex to Management Plan Item (11)".

23. Person Responsible for the Implementation and Approval of the Management Plan

The particulars of the person responsible for the implementation of and approving the management plan.

Name:	**Miss YIP Yuk-ping, Rita**
Position:	**Applicant**
Contact No.:	
Email Address:	

Submitted for and on behalf of the above-named columbarium

Name:	**Miss YIP Yuk-ping, Rita**
Position:	**Applicant**
Contact telephone no.:	
Email address:	
Signature:	
Date:	

List of Annexes

Annex A	Bus Routes, Green Mini Bus Routes, LRT Routes to Tin Kwong Lun Yee, Tuen Mun
Annex B	Supply & Distribution of Manpower of Tin Kwong Lun Yee
Annex C	Specific Duties of Staff/Security Personnel/Traffic Wardens of Tin Kwong Lun Yee
Annex D	Location Map, Master Layout Plan & Free Shuttle Bus Routes to/from Tin Kwong Lun Yee
Annex E	Useful Telephone contacts of TD, Police, FSD & AMS
Annex F	Pictures of Tin Kwong Lun Yee, its Columbarium Halls, route leading to Tin Kwong Lun Yee from Tin King LRT Stop, Tuen Mun & Emergency Evacuation Route(s)

Annex 'A'

Bus Routes, Green Mini-Bus Routes & LRT Route to Tin Kwong Lun Yee, Tuen Mun

Public Transport	**From**	**To**
Bus Route No.		
58M	Leung King Estate Bus Terminus	Kwai Fong Stn Bus Terminus (Route thro' Ming kun Rd o/s Po Tin Estate, Tuen Mun) (Round Trip)
58P	Kwai Fong Stn Bus Terminus	Tin King Estate (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round Trip)
58X	Leung King Estate Bus Terminus	Mong Kok East Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
258D	Po Tin Estate PTI	Lam Tin Stn (Round trip)
258S	Shan King bus Terminus	Lam Tin Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
258X	Po Tin PTI	Kwun Tong Ferry (Route thro' Ming Kum Rd o/s Po tin Estate, Tuen Mun) (Round trip)
260X	Po Tin PTI	Hung Hom Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)

960	Kin Sang Bus Terminus	Wanchai North (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
960A	Central (Pottinger St)	Hung Shui Kiu (Hung Fuk Estate) (Round trip)
960B	Quarry Bay	Hung shui Kiu (Hung Fuk Estate) (Round trip)
960X	Hung Shui Kiu (Hung Yuen Rd)	Quarry Bay (King's Rd)
961P	Leung King Estate	HKCEC (Round trip)
Green Minibus Route No.		
40	Siu Hang Tsuen	Tuen Mun Town Centre (route thro' Po Tin Estate, Hing Kwai St) (Round trip)
44A	Tuen Mun Stn	Sheung Shui Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
44A1	Po Tin Estate, Tuen Mun	Sheung Shui Stn (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
44B	Tuen Mun Stn	Lok Ma Chau PTI (Route thro' Ming Kum Rd o/s Po Tin Estate, Tuen Mun) (Round trip)
LRT Route		
505	Sam Shing	Siu Hong (Stop at Tin King Stop)

507	Tuen Mun Ferry Pier	Tin King
615	Tuen Mun Ferry Pier	Yuen Long MTR & LRT Stn
615P	Tuen Mun Ferry Pier	Siu Hong

Remarks : The routes are from one location to the other and vice versa.

Annex 'B'

Supply & Distribution of Manpower of Tin Kwong Lun Yee Staff/Security Personnel/Traffic Wardens

For

Traffic & Crowd Management

Supply of Manpower by Tin Kwong Lun Yee Management

Manpower	Applicant & Manager	TKLY Staff	Security Guards/Traffic Wardens
No.	2	13	39

Distribution of Manpower by Tin Kwong Lun Yee Management

Location	Applicant/Manager	TKLY Staff	Security Guards/Traffic Wardens
Command Post	2		
Main Entrance of TKLY		1	2
Unnamed Concrete Slip Rd leading to TKLY/Hing Fu St cul-de-sac R/A		2	SG2 TW2
Unnamed Concrete Slip Rd bet. Hing Fu St R/A & Main Entrance of TKLY			2
Holding Area at the Compound in front of the 3 Columbarium Blks		3	6
Shuttle Bus Bay i/s TKLY facing the Compound		1	2

Departure Area behind the Shuttle Bus Bay		1	2
I/s the 6 Columbarium Halls (1 Security Guard in each hall)			6
Open area of the Compound o/s each Columbarium Halls			3
Private Car Park Area i/s TKLY		1	2
Rear Platform & ramps behind Columbarium Blk 1 - 3		2	3
MTR West Rail Siu Hong Stn North PTI General Layby		2	2
Along Hing Fu Street W/B Pavement			TW5
Total	2	13	39

Annex 'C'

Specific Duties of Tin Kwong Lun Yee Staff/Security Personnel for Traffic and Crowd Management

Location	Rank	Duties
TKLY area/Command Post	Applicant & Manager 2	● Overall supervision of TKLY site, staff & security guards/traffic wardens for traffic/crowd management ● Oversee the implementation of the Special Traffic & Crowd Management arrangement for TKLY ● To ensure the implementation of the visit-by-appointment & admission control system inside TKLY ● To employ professional security company to provide professional security guards/traffic wardens for traffic/crowd management for TKLY ● To employ professional transport company to provide adequate shuttle buses to conduct the free shuttle bus services bet. TKLY & MTR West Rail Siu Hong Stn North PTI ● To ensure the efficient running of the free shuttle bus services provided by TKLY ● To command the CP for the command/deployment of duties for traffic/crowd management i/s & o/s TKLY ● Act as a point of liaison with Police/FSD, if necessary

		● Deal with emergency situations ● Deal with evacuation situation, if required ● Oversee the operation of the CP ● Conduct detailed briefing for TKLY staff/security guards/traffic wardens regarding traffic/crowd management prior to the operation ● Coach staff/security guards/traffic wardens on traffic/crowd management to be adopted, if necessary inside TKLY ● Brief staff/security guards/traffic wardens regarding the handling of emergency situation/evacuation ● Ensure staff vigilance & diligence thro' visits to static locations i/s & o/s TKLY ● Deal with complaints & trespassers ● Deal with reported/ad hoc incidents ● Conduct 'After Action Review' for the operation for future improvement, if required ● Arrange meal break for TKLY staff/security guards
Main Entrance of TKLY	TKLY staff 1 Security guard 2	● To welcome & guide worshippers into TKLY ● To conduct traffic control for in-coming free shuttle buses/private cars with disabled/elderly ● To verify the validity of P/Cs carrying disabled/elderly ● To verify ad hoc visitors & late

		comers ● To help to implement the admission control system ● To guide visitors to the holding area set up at the compound o/s the columbarium blks ● Maintain close radio communication with the CP and staff/security guards deployed at key locations w/i TKLY for crowd management. ● Deal with any ad hoc incidents ● Deal with emergency situations ● Deal with evacuation situation, if required ● To assist Police when called for
Unnamed Concrete Slip Rd leading to TKLY/Hing Fu St cul-de-sac R/A	TKLY staff 2 Security guard 2 Traffic Wardens 2	● To conduct traffic/crowd management, if required ● To assist free shuttle buses to go up the unnamed slip rd leading from Hing Fu St to TKLY ● To verify ad hoc visitors & assist visitor cars w/o advance booking to stop at the R/A for alighting visitors & guide the vehicles to leave the R/A as quickly as possible w/o causing any blockage at the R/A ● To monitor the in-flow/out-flow of worshippers to and from the TKLY & the R/A ● To liaise closely with those deployed at the entrance for traffic & crowd management ● To implement emergency traffic plan as directed by CP, if required ● Give advice to worshippers on

		enquiries ● Maintain radio communication with the CP regarding the flow of worshippers/vehicles ● Deal with any ad hoc incidents ● Deal with emergency situations ● Deal with evacuation, if required ● To assist Police when called for
Unnamed Concrete Slip Rd bet. Hing Fu St R/A & main entrance of TKLY	Security guard 2	● To assist shuttle buses going up & down of the unnamed slip rd ● To guide/direct visitors to walk up/walk down the unnamed slip rd by the side of the rd in an orderly manner w/o creating any conflict with the flow of shuttle buses & P/Cs carrying disabled/elderly to & from TKLY ● To patrol the unnamed slip rd to prevent accidents to occur ● Maintain radio communication with the CP regarding traffic/crowd management ● To deal with complaints on the spot or refer complaints to Manager to deal with, if necessary ● Deal with ad hoc incidents ● Deal with any emergency situations ● Deal with evacuation situation, if required
Holding Area at the Compound in front of the 3 Columbarium Blks	TKLY Staff 3 Security guard 6	● To assist the Applicant to set up the holding area at the compound in front of the 3 columbarium blks ● To arrange the worshippers to line up in 3 rows waiting to be released into the respective

		columbarium halls for worship (1 row for 1 columbarium blk) ● To ensure worshippers line up in an orderly manner w/i the holding area ● To implement the tidal flow system, if required ● To ensure an orderly, steady and staggered release of worshippers into the respective columbarium blks ● To arrange ad hoc visitors to wait at the holding area awaiting their turns to enter the respective columbarium blks for worship as priority will be given to those visitors with advance E-booking ● Maintain radio communication with CP regarding crowd management i/s TKLY ● Maintain radio contact with other staff/security guards deployed inside the columbarium halls to ensure no overflown of worshippers i/s the respective columbarium halls ● Deal with complaints on the spot or refer complaints to Manager to deal with, if necessary ● Deal with ad hoc incidents ● Deal with any emergency situations ● Deal with evacuation situation, if required
Shuttle Bus Bay i/s TKLY facing the Compound	TKLY Staff 1	● To guide/direct shuttle buses to park at the parking spaces w/i the shuttle bus bay

	Security guard 2	● To assist worshippers to alight from the shuttle buses & guide/direct them to walk towards the holding area set up at the compound o/s the 3 columbarium blks ● Assist departing shuttle buses to leave the shuttle bus bay w/o causing any traffic/crowd conflict ● Maintain radio communication with the CP regarding the movement of worshippers within TKLY ● Deal with any ad hoc incidents ● Handle enquiries & complaints, if any ● Deal with casualty/injuries, if any ● Deal with any emergency situations ● Deal with evacuation situation, if required
Departure area behind the Shuttle Bus Bay	TKLY Staff 1 Security guard 2	● To arrange departing worshippers to wait at this gathering area where they can line up thereat waiting to get on board shuttle buses to leave TKLY for Siu Hong Stn North PTI for dispersal ● If the aforesaid area is fully occupied, arrange the worshippers to line up in single file at the rear alley behind the columbarium blks waiting for their turns to take the shuttle buses to leave TKLY ● Maintain radio communication

		with CP & other post duties regarding crowd management ● Deal with any ad hoc incidents ● Deal with sick/injuries, if any ● Deal with any emergency situation ● Deal with evacuation situation, if required
I/S the 6 columbarium Halls (1 security Guard in each Hall)	Security guard 6	● To monitor the worshipping activities i/s the respective columbarium halls ● Worshippers finished worship on the 1/F of the 3 columbarium blks are guided/directed to leave the columbarium halls via the rear exits and walk down the ramps and staircases to the rear alley behind the columbarium blks & walk towards south towards the shuttle bus bay for taking the shuttle bus to leave TKLY ● Worshippers finished worship at the 3 columbarium halls located on the G/F of the columbarium blks are guided to leave via the respective columbarium halls' entrances to the compound where they will be guided to walk south towards the shuttle bus bay for taking shuttle by to leave TKLY ● To maintain radio communication with the CP regarding crowd management and those deployed at the holding area so as to ensure no overflown of worshippers i/s the

		respective columbarium halls ● To ensure no burning of incense materials i/s the respective columbarium halls ● Deal with any ad hoc situations ● Deal with emergency situations ● Deal with evacuation situation, if required
Open area of the Compound o/s each columbarium hall	Security guard 3	● To monitor the in-flow & out-flow of worshippers to/from respective columbarium halls ● To ensure no conflict bet. Arriving & departing worshippers ● To assist the drop-off of disabled and/or elderly at the car parking area & arrange the parking of P/Cs into the respective parking spaces ● Maintain close radio communication with the CP regarding crowd management ● To assist others deployed at the holding area for crowd management if called upon for ● To take action in the event of emergency evacuation
Private Car Park Area i/s TKLY	TKLY Staff 1 Security guard 2	● To assist disabled/elderly to get off vehicles ● To guide/direct P/C drivers to park cars into the allocated parking spaces ● To ensure vehicles parking are conducted in a safe condition ● To ensure the P/C drivers to leave TKLY on time (the allocated veh. parking time is not more than 30 minutes)

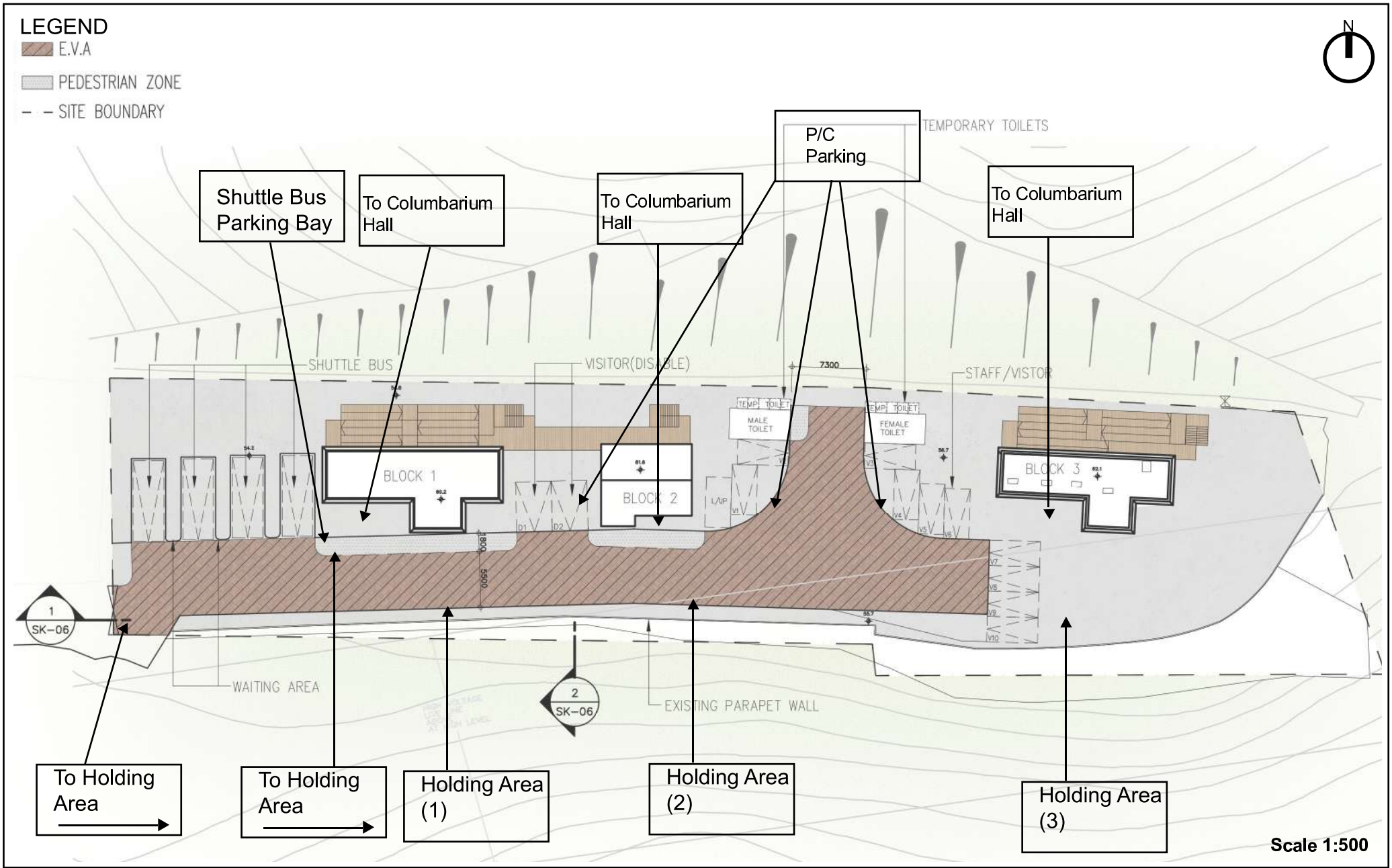
		● To maintain radio contact with the CP regarding the vehicle parkings and movement of worshippers ● Be prepared to be re-deployed to other location(s) inside TKLY area for crowd control ● To take action in emergency situation(s)
Rear Platform & ramps behind Columbarium Blk 1 - 3	TKLY Staff 2 Security guard 3	● To monitor the out-flow of leaving worshippers ● To ensure an orderly dispersal of worshippers onto the rear alley behind the columbarium blks & that worshippers walk in the direction towards south for the shuttle bus bay area ● Maintain close radio communication with CP regarding the dispersal of worshippers ● Deal with ad hoc incidents ● Deal with emergency situations ● Deal with evacuation, if required
MTR West Rail Siu Hong Stn North PTI General Layby	TKLY Staff 2 Security guard 2	● To assist Shuttle Bus Service from Siu Hong Stn North PTI to TKLY ● To verify the validity of worshippers who take the free shuttle bus services ● Those w/o valid permits issued by TKLY will be denied using the free shuttle bus services ● To assist worshippers to line up in an orderly manner at the general layby at the PTI for taking the free shuttle bus services

		● To guide/direct worshippers regarding dispersal at the PTI ● To deal with ad hoc incidents ● To maintain close contact with the CP regarding all matters in relation to the free shuttle bus services provided by TKLY.
Along Hing Fu Street W/B Pavement	Traffic Wardens 5	● To implement the emergency traffic plan as directed by CP ● Place directional signs along Hing Fu Street W/B pavement to guide in-coming private vehicles and taxis to reach the pick-up/drop-off point set up at Hing Fu Street R/A ● To guide visitors on foot along the pavement of Hing Fu Street W/B the direction to reach TKLY ● To observe the traffic situation at the vehicular accesses to Po Tin Estate and to ensure no blockage at the said vehicular accesses ● To assist Police if required ● To take appropriate action in emergency situation as directed by CP



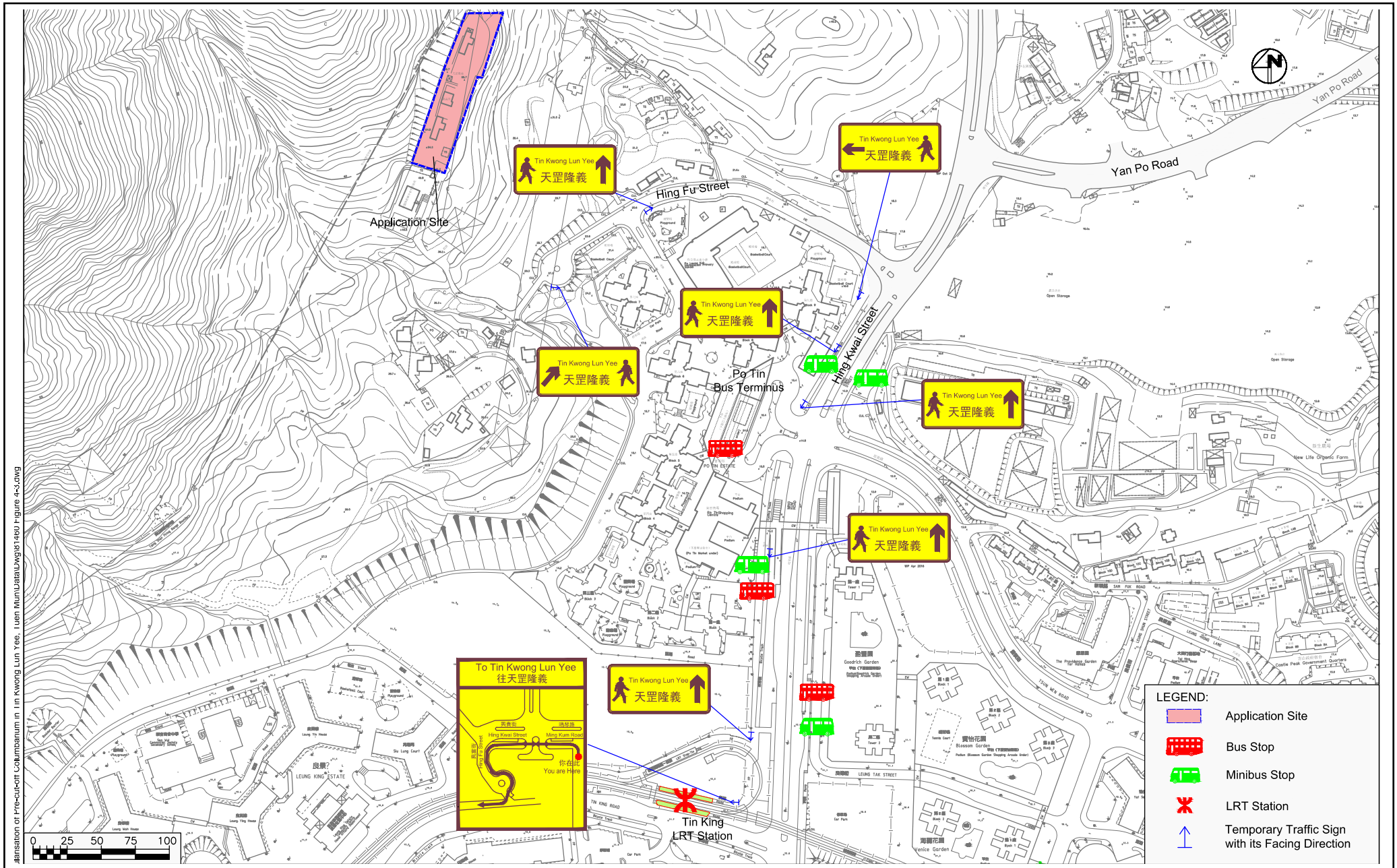
Annex D

Plan A: Location Map of Tin Kwong Lun Yee



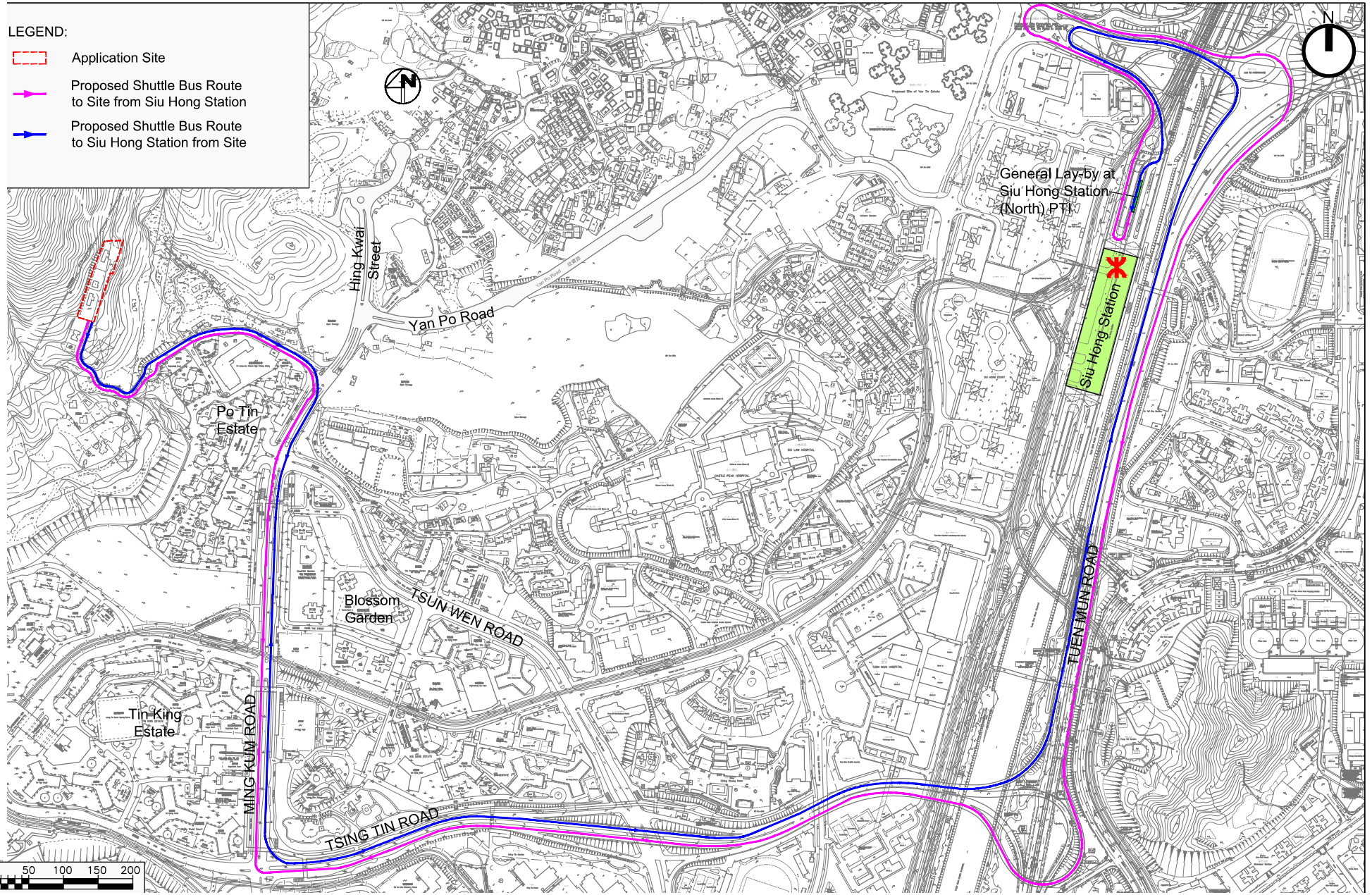
Annex D

Plan B: Tin Kwong Lun Yee Proposed Master Layout Plan and Position of Directional Signs inside TKLY



Annex D

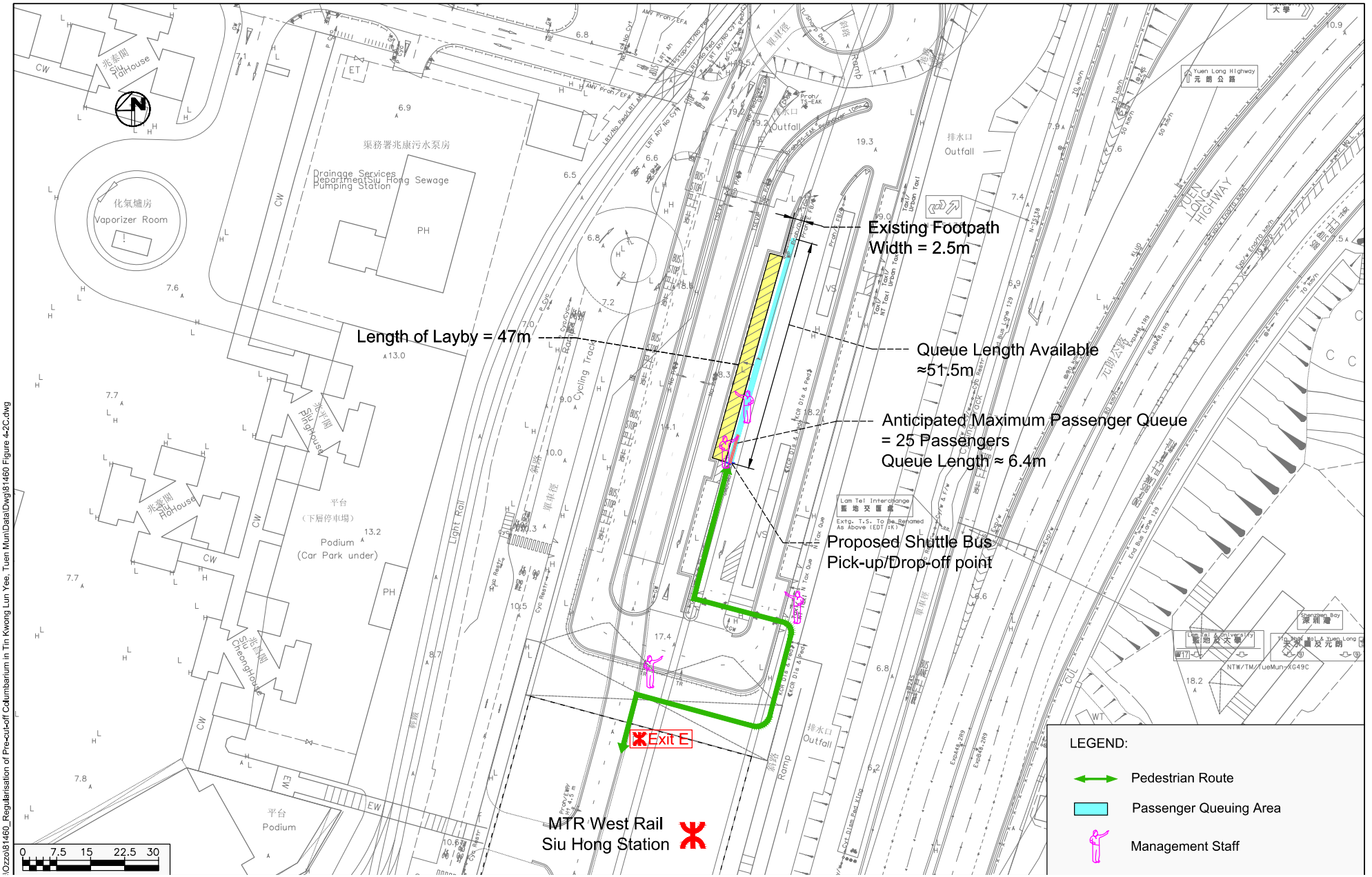
Plan B1: Proposed Temporary Traffic Arrangement During Grave Festival Shadow Period on Weekdays



OZZO TECHNOLOGY

Annex D

Plan C: Free Shuttle Bus Services From TKLY to MTR West Rail Siu Hong Stn North PTI & Vice Versa

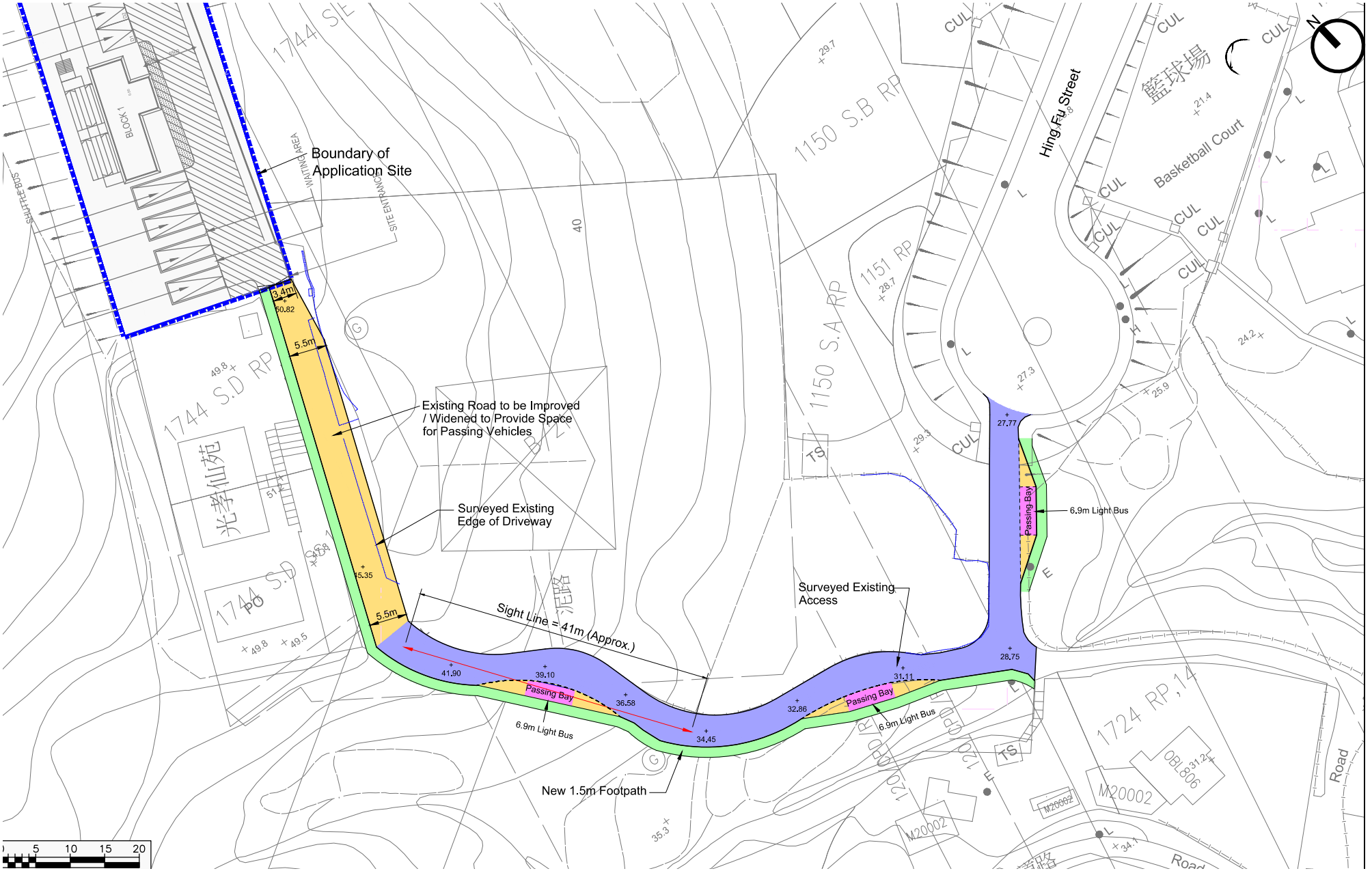


\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 4-2C.dwg

OZZO TECHNOLOGY

Annex D

Plan D: MTR West Rail Siu Hong Station North PTI General Layby



OZZO TECHNOLOGY

Annex D

Plan E: Proposed Road Widening of the Unnamed Concrete Slip Road bet. Tin Kwong Lun Yee Site and the Hing Fu St Cul-de-sac R/A

Annex 'E'

Useful Telephone Contacts of TD & Police

Dept	Name	Rank	Tel	Email Address
TD	Mr. LEUNG Chun-him, Damon	Sr Transp Officer Tuen Mun	23992450	chunhimleung@td.gov.hk
TD	Ms CHULai-yee, Rachel	Transp Officer Tuen Mun	23992449	rachellychu@td.gov.hk
HKPF	Mr. WONG Tung-pan	ADVC OPS TMDIV	36615802	advc-ops-tmdiv@police.gov.hk
HKPF	Ms LO Kit-ying	OSSUC TMPoDIV	36615820	ossuc-tmdiv@police.gov.hk
HKPF	Mr. TSANG Hin-kin	SP E&CDIV T NTN	36613801	sp-e-c-ntn@police.gov.hk
HKPF	Mr. WONG Man-ka	SIP OPS E&CDIV T NTN	36613810	ip-sip-ossu--e-c-ntn@police.gov.hk

Useful Telephone Contacts of FSD

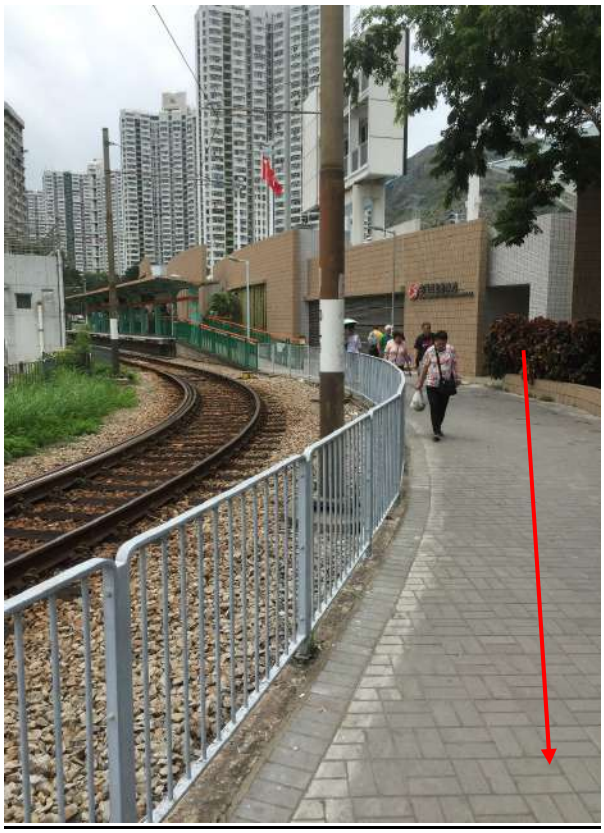
Unit	Email	Telephone	Fax
NT & Kln E Fire Prevention Office	ado_pctf@hkfsd.gov.hk so1_pctf@hkfsd.gov.hk so2_pctf@hkfsd.gov.hk	23025326 23025334 23025335	23029023
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Annex 'F'

Pictures of Tin Kwong Lun Yee, Its Columbarium Halls, Holding Area(s) & Emergency Evacuation Routes

	**Photo 1**: Tin King LRT Stop o/s Po Tin Estate. Visitors access TKLY can walk along the pavement towards western pavement of Ming Kum Road heading for Hing Fu Street via western pavement of Hing Kwai Street for TKLY.
	**Photo 2:** Po Tin Public Transport Interchange (PTI) underneath Po Tin Estate at Ming Kum Road where visitors can take bus to this PTI and then walk along Ming Kum Road, Hing Kwai St heading north for Hing Fu St for TKLY.

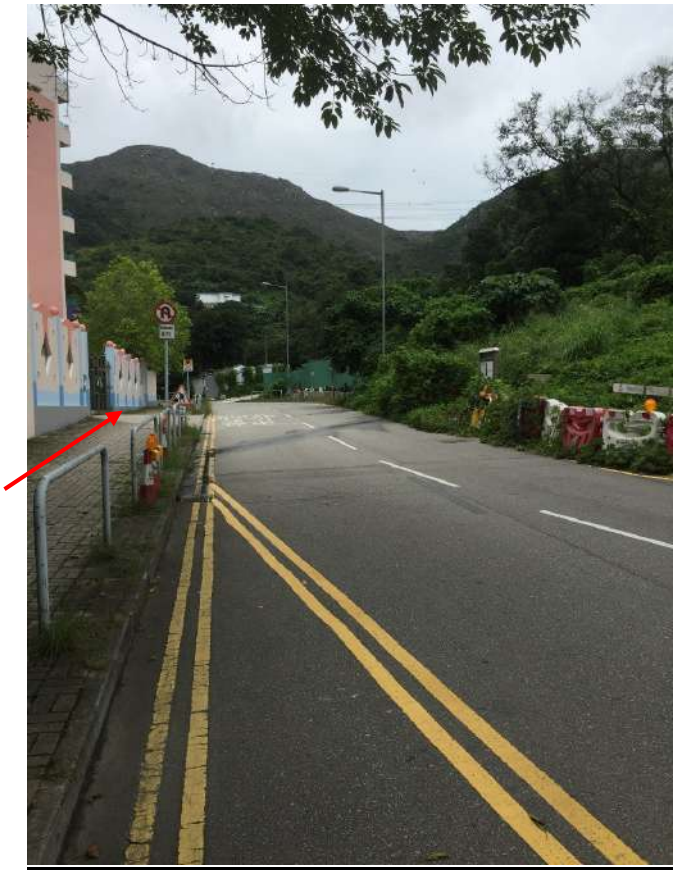
	**Photo 3:** Visitors can walk along the pavement of Hing Fu St heading west for Hing Fu St cul-de-sac R/A and the unnamed concrete slip road leading up to TKLY.
	**Photo 4:** Hing Fu St cul-de-sac roundabout where driven vehicles can drop-off visitors at the R/A and let them to walk up the unnamed concrete slip road for TKLY.

	**Photo 5:** The unnamed slip road linking the Hing Fu St cul-de-sac R/A with TKLY.
	**Photo 6:** Tin Kwong Lun Yee Main Entrance by the end of the unnamed concrete slip road.

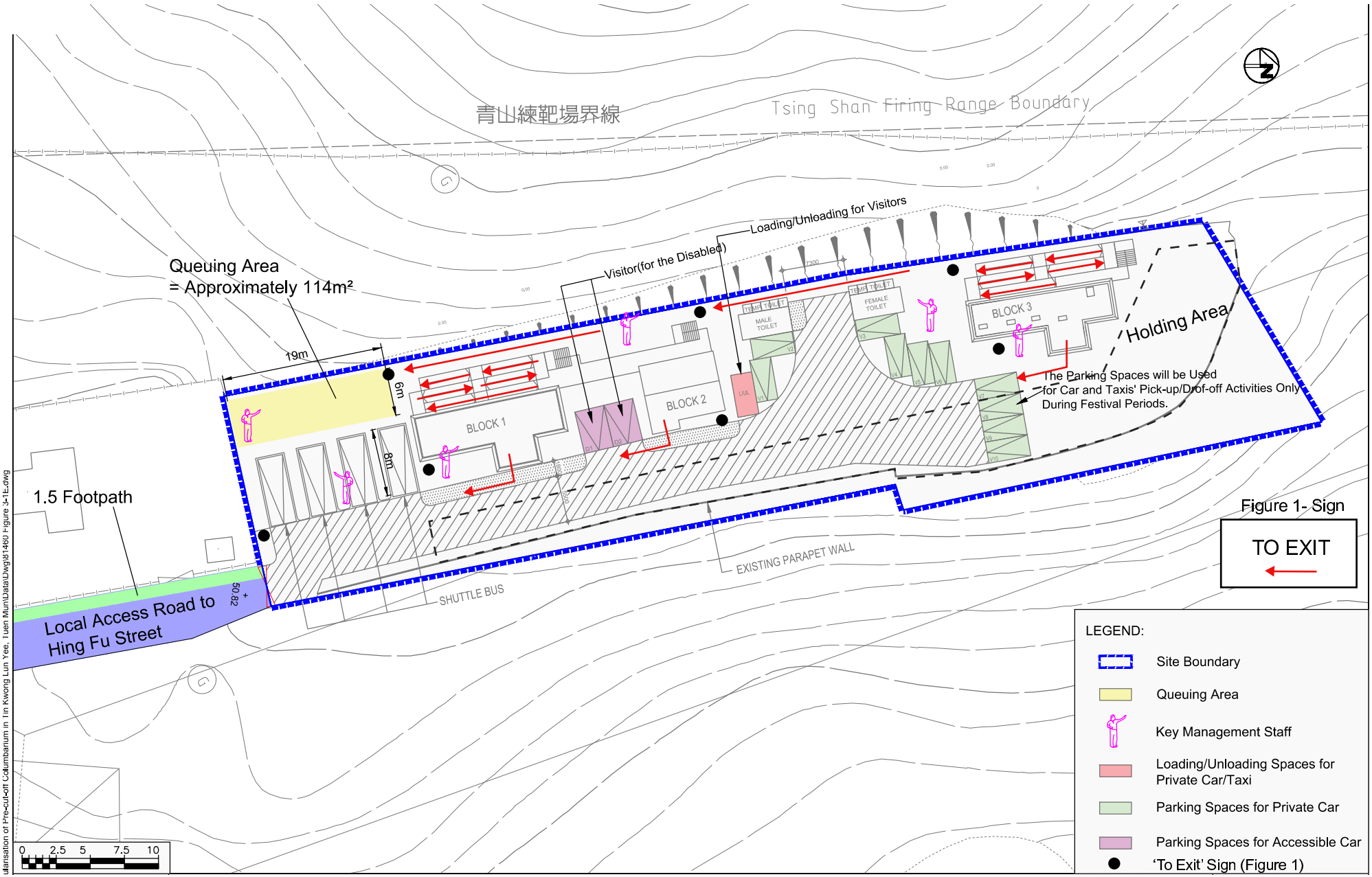
	**Photo 7:** Tin Kwong Lun Yee Main Entrance Gate. It is wide enough for the access of the 24 seat shuttle bus.
	**Photo 8:** The large open area by the right hand side of columbarium blk 1 i/s TKLY where the future shuttle bus bay will be delineated.

	**Photo 9:** The open area in front of the main entrance of TKLY.
	**Photo 10:** The long and wide compound in front of columbarium Blk 1 to 3 which can accommodate large number of worshippers & holding area can be set up at the compound for periodical release of worshippers into the columbarium Blks for worship.

	**Photo 11:** Entrance of the G/F columbarium hall of columbarium blk 1.
	**Photo 12** Staircase leading from the G/F to the 1/F columbarium Hall of one of the Columbarium Blks. Fire extinguisher is mounted at the entrance of the Columbarium Hall.

	**Photo 13:** Exit to the rear of the Columbarium Hall with Exit Sign displayed.
	**Photo 14:** Ramp leading from the 1/F of the Columbarium Blk to the rear alley behind the Columbarium Blks where worshippers can walk along the rear alley towards south heading for the shuttle bus bay for departure. The ramps will be reconstructed as per the designed master

	layout plan made by A & B Architects.
	**Photo 15:** The internal view of one of the Columbarium Halls on the 1/F of one of the Columbarium Blks. The niche spaces will gradually be sold when columbarium licence is approved in due course.
	**Photo 16:** Fire extinguisher is placed at the entrance of the Columbarium Hall.



Annex F

Plan F: Proposed Holding area, Pick-up/Drop-off Area & Queueing Area

LEGEND

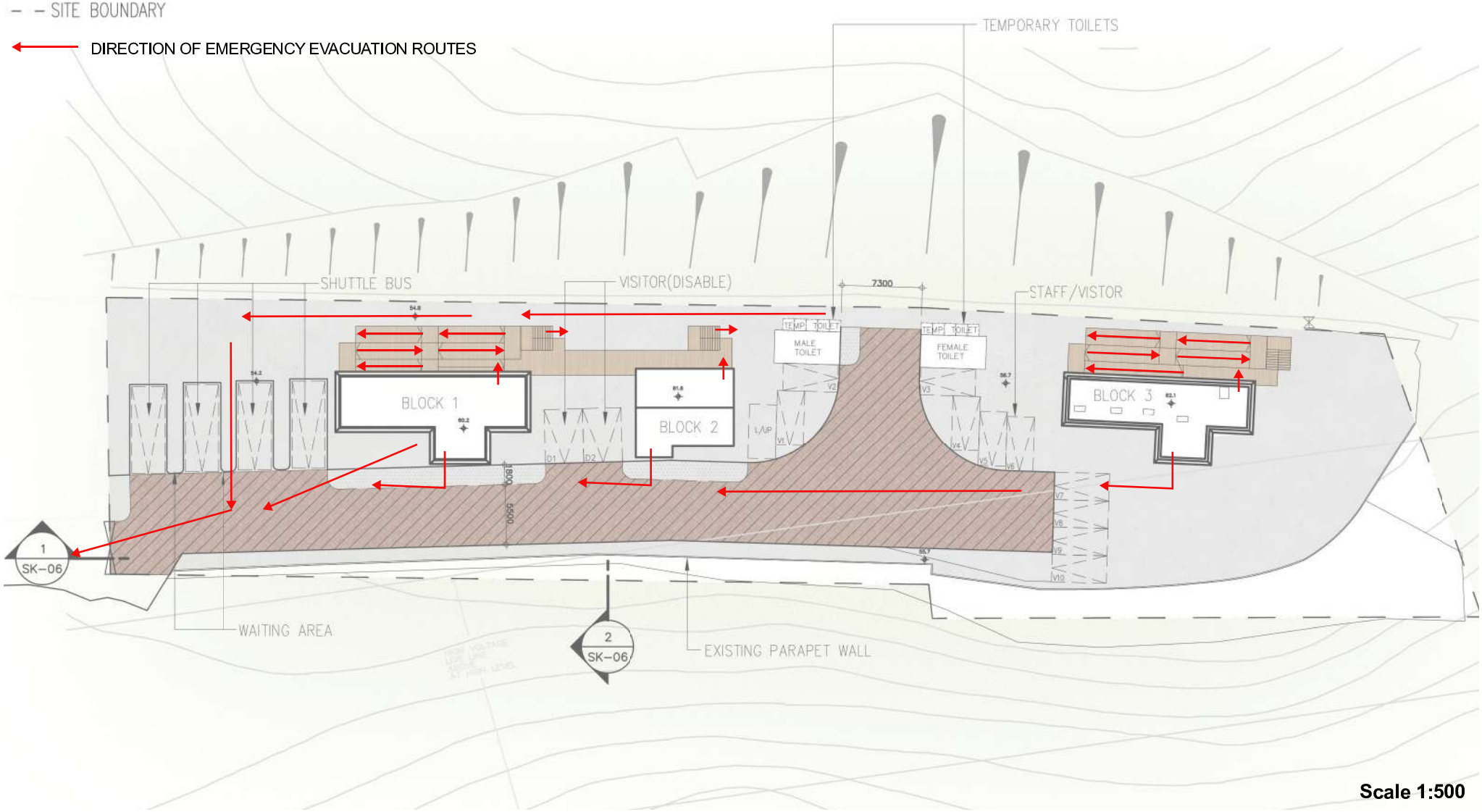
E.V.A

PEDESTRIAN ZONE

SITE BOUNDARY

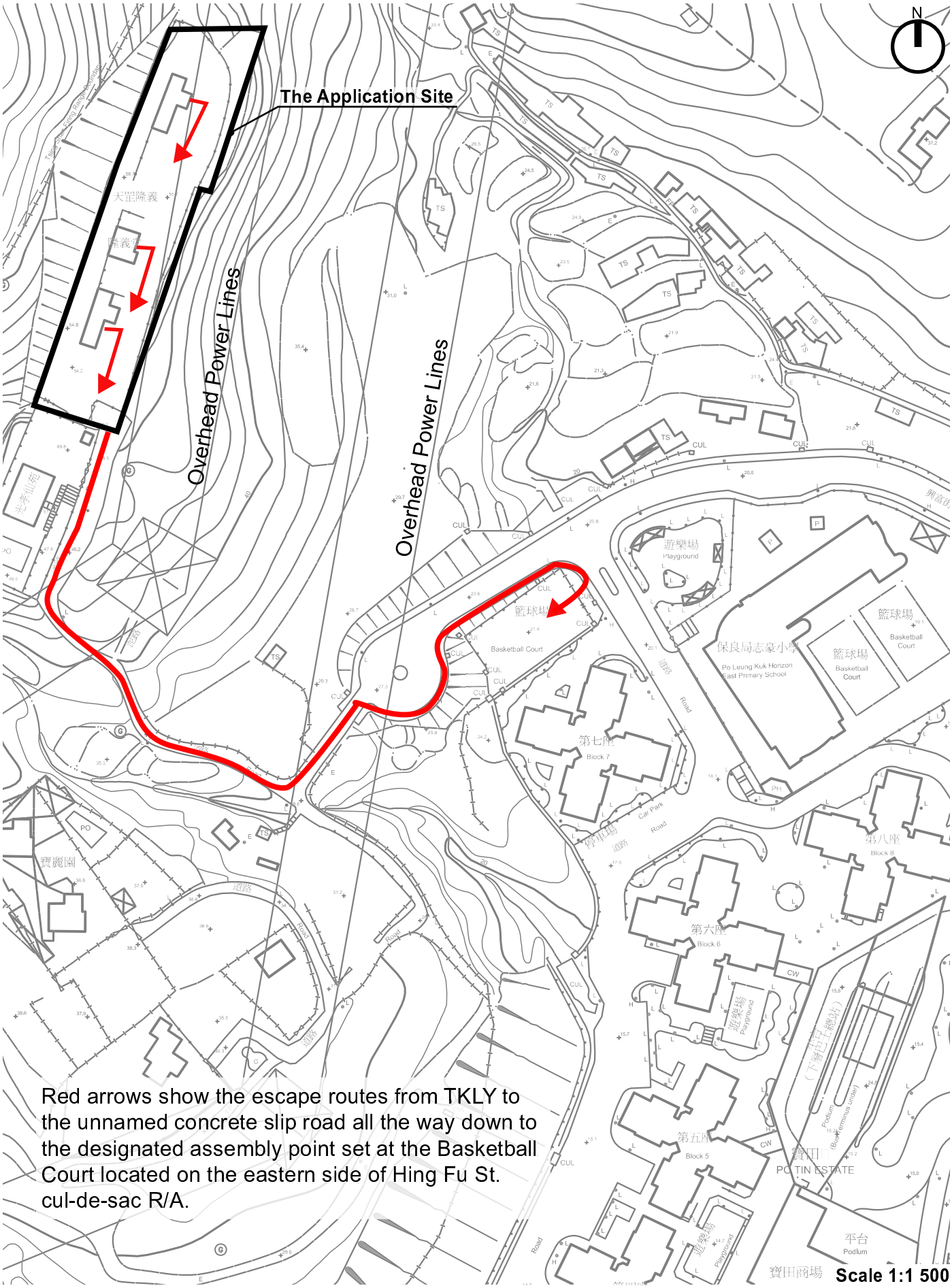
DIRECTION OF EMERGENCY EVACUATION ROUTES

Arrows show the direction of emergency evacuation routes i/s TKLY to the main entrance of the site.

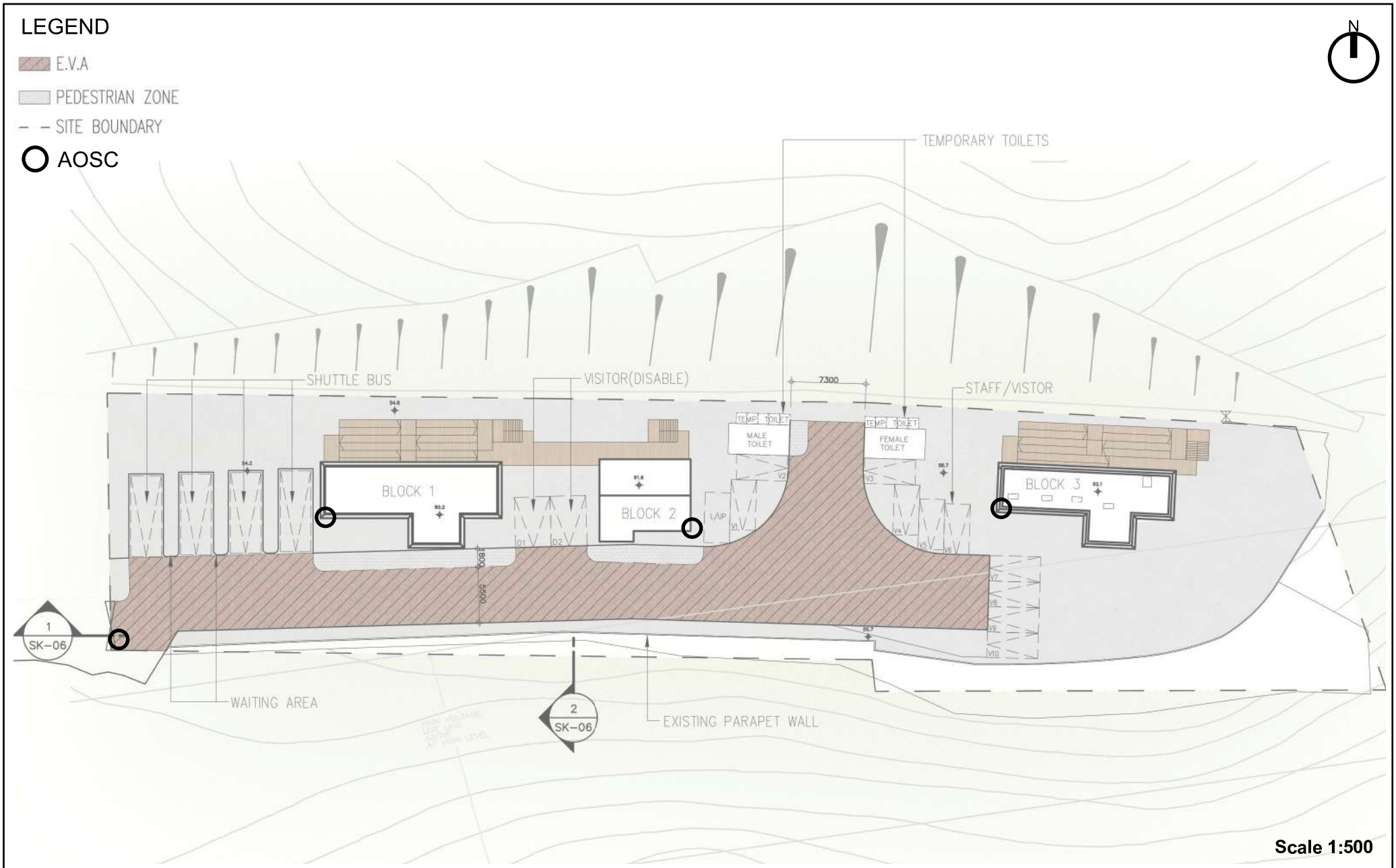


Annex F

Plan G: Emergency Evacuation Routes



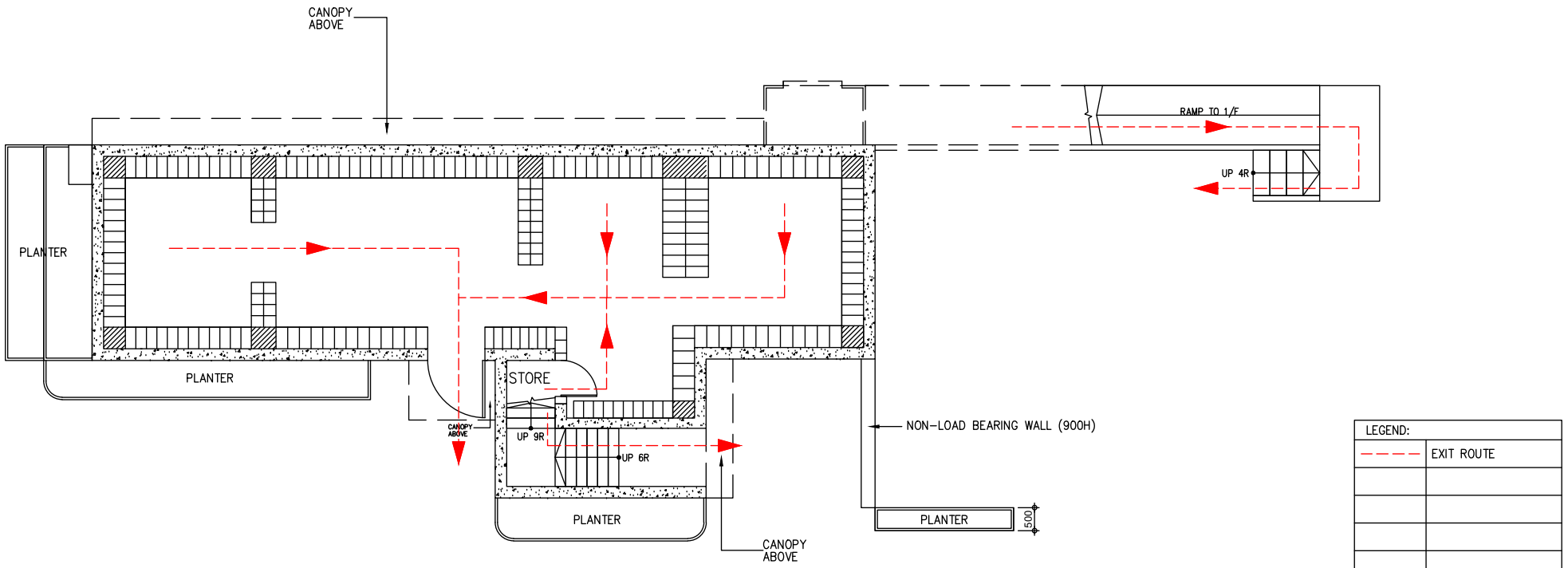
Annex F	Plan H: Escape Routes from TKLY and the Designated Assembly Point



Annex F

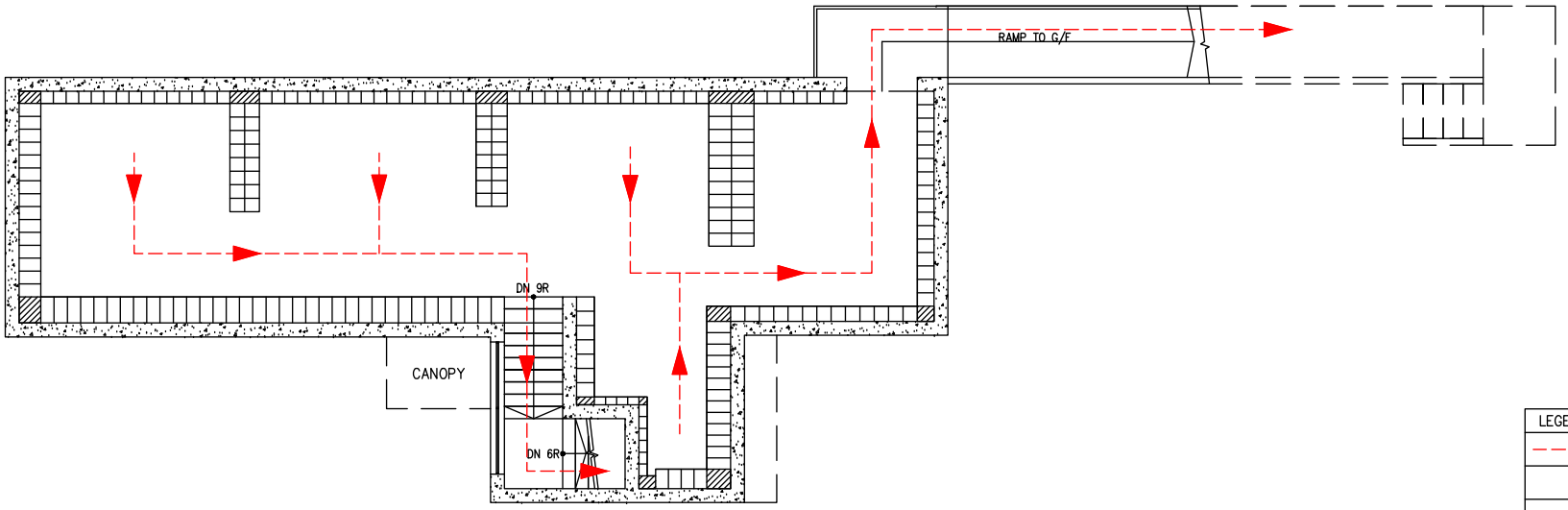
Plan I: Locations of Aerial Overhead Surveillance Cameras (AOSC)

BLOCK 1 G/F EVACUATION PLAN



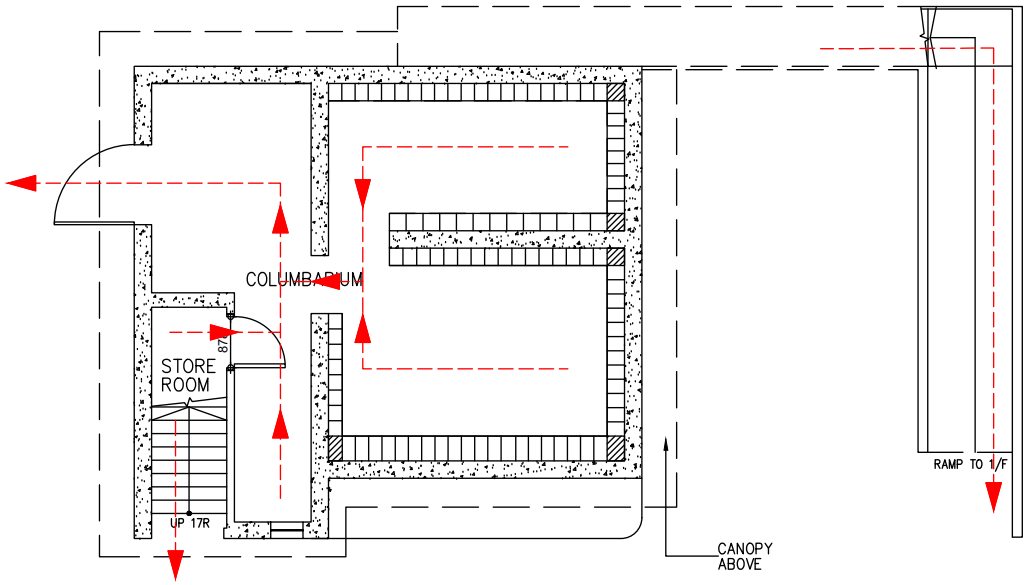
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BLOCK 1 1/F EVACUATION PLAN



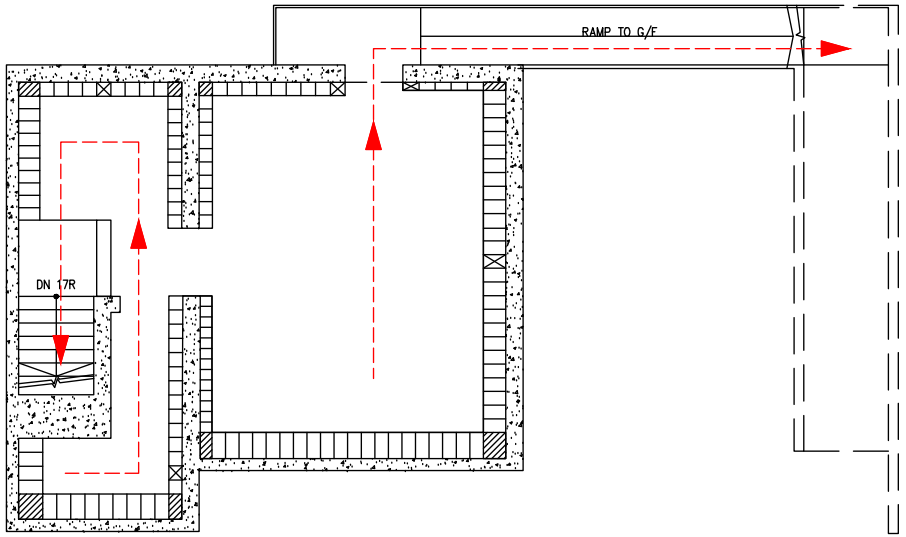
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BLOCK 2 G/F EVACUATION PLAN



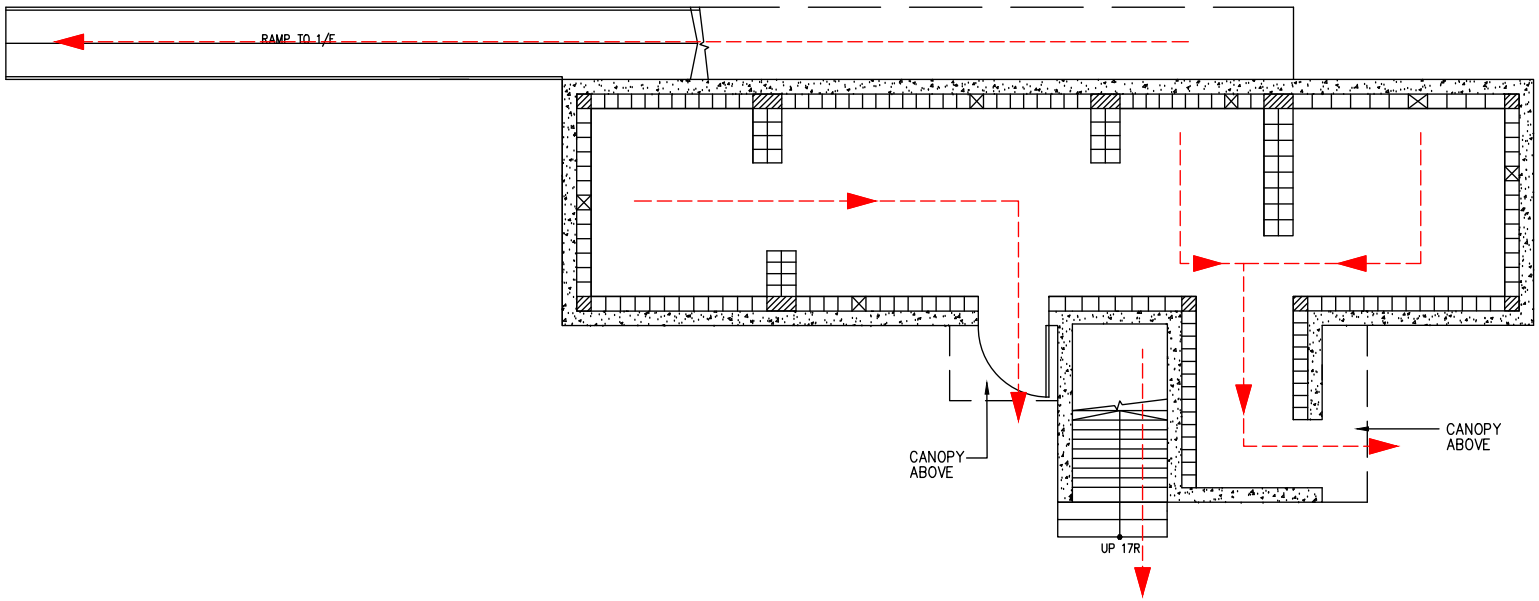
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BLOCK 2 1/F EVACUATION PLAN



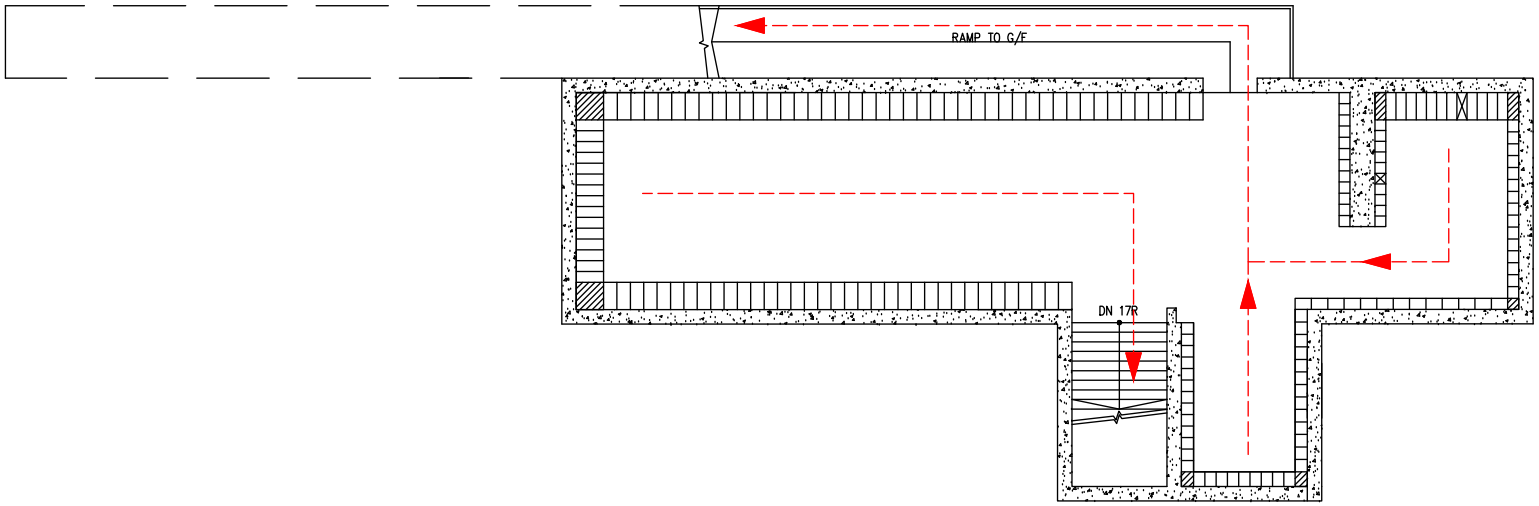
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BLOCK 3 G/F EVACUATION PLAN



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BLOCK 3 1/F EVACUATION PLAN



LEGEND:	
- - - -	EXIT ROUTE

SMEC
Member of the Surbana Jurong Group



7076606 | D01/01 Rev 5.0 Environmental Assessment Report

S12A Rezoning Application from "GB" to "G/IC" for a Religious Institution at Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744H and 1744I in DD 132, Tuen Mun

Prepared for Tin Kwong Lun Yee Ltd
1 February 2021

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This report is confidential and is provided solely for the purposes of supporting S12A Rezoning Application from "GB" to "G/IC" for a Religious Institution at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H and 1744 I in D.D. 132, Tuen Mun. This report is provided pursuant to a Consultancy Agreement between SMEC Asia Limited ("SMEC") and Tin Kwong Lun Yee Ltd, under which SMEC undertook to perform specific and limited tasks for Tin Kwong Lun Yee Ltd. This report is strictly limited to the matters stated in it and subject to the various assumptions, qualifications and limitations in it and does not apply by implication to other matters. SMEC makes no representation that the scope, assumptions, qualifications and exclusions set out in this report will be suitable or sufficient for other purposes nor that the content of the report covers all matters which you may regard as material for your purposes.

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The report supersedes all previous draft or interim reports, whether written or presented orally, before the date of this report. This report has not and will not be updated for events or transactions occurring after the date of the report or any other matters t might have a material effect on its contents or which come to light after the date of the report. SMEC is not obliged to inform you of any such event, transaction or matter nor to update the report for anything that occurs, or of which SMEC becomes aware, after the date of this report.

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1 INTRODUCTION

1.1 Background

1.1.1 SMEC Asia Limited (SMEC) has been commissioned by Tin Kwong Lun Yee Ltd (the Applicant) to conduct an Environmental Assessment (EA) to support the Planning Application under S12A of the Town Planning Ordinance (TPO), to rezone the subject site, which comprises Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D.132, Tuen Mun (the Site or the Project) from "Green Belt" ("GB") to "Government, Institution or Community" ("G/IC"). The "G/IC" zoning covers religious institution as a permitted use under column 1 on the relevant Approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35.

1.1.2 Tin Kwong Lun Yee (天罡隆義) is a branch of Vajrayana (密宗) from the Tibetan Buddhism (藏傳佛教) religion of the Taiwan stream. Tin Kwong Lun Yee is dedicated to provide training and coaching to members who wish to realise the Buddha's teaching in their daily life and to benefit all sentient beings as well. As a low-profile and newly established religion in Hong Kong, Tin Kwong Lun Yee is committed to provide social services by volunteering and offers assistance, as needed, to local social welfare organisations.

1.2 Site Description

1.2.1 The Site is located at the upper part of the Kwong Shan Tsuen and north-west of Po Tin Estate in Tuen Mun, as illustrated on ***Figure 1-1***. The Site occupies an area of 3,137m^2. The Site was vacant before 1960. Three existing 2-storey villas occupy the Site and the building licence for these buildings was issued in 1960. The site was used for residential purposes until 1990s. In 2008, the Site was acquired by Tin Kwong Lun Yee and the abandoned villas were renovated for its use. The Site is accessible from an existing, paved access road connected to Hing Fu Street.

1.3 Project Description

1.3.1 ***Figure 1-2*** presents a Master Layout Plan of the Project. As illustrated, the Project comprises the following facilities:

- One columbarium blocks (Block 1);
- One building block for columbarium, toilet, management office and storage (Block 2);
- One building block for religious and columbarium use (Block 3);
- A car parking area; and
- Landscape areas, pedestrian areas and access roads.

1.3.2 No major building construction or demolition works will be required for the Project since its buildings and structures are already in place.

1.3.3 Totally 11,094 niches will be provided for the Project and 936 niches of which were sold on or before 30 June 2017 to satisfy the genuine need of columbarium supply in Hong Kong.

1.3.4 It is envisaged that these additional columbarium facilities can be accommodated within the existing building structures, including the religious hall and management office.

1.3.5 The columbarium operates daily including weekends and general holidays, except Ching Ming and Chung Yeung Festival Day, and the weekends of two weeks before/after the Festival day. The operation details are summarised in ***Table 1-1*** below.

Table 1-1: Detailed Operation Period of Tin Kwong Lun Yee

Period	Operation Hours
Festival Period (Total 5 days) • Festival Day (Ching Ming / Chung Yuen Festival) • Saturday and Sunday two weeks before the Festival day • Saturday and Sunday two weeks after the Festival Day	The Columbarium will be closed.
Festival Period – Weekday (Monday – Friday excluding general holidays)	8am – 5pm
Non-Festival Period (Monday – Sunday)	10am – 5pm

1.3.6 A site visit was carried on 22 June 2018. Approximately 5 to 10 minutes on foot are required to reach the Site from Hing Fu Street. As advised by the Applicant, it is unlikely that a large number of visitors will come to the Site during non-festival periods, while advance booking is required by the Applicant weekdays within festival periods to control visitor number.

1.3.7 As advised by the Applicant, advance reservation for the shuttle bus services will be required. No other vehicles except emergency vehicles and no other visitors apart from those who will have made the reservation in advance will be allowed to enter the Site during weekdays within festival periods.

1.3.8 During non-festival periods, not more than 48 visitors per day are expected to visit the Site. Therefore, no advance reservation and shuttle bus service, as well as traffic control will be necessary.

1.3.9 There may be religious activities carried out by worshippers during non-festival periods.

1.4 Objective of this Report

1.4.1 This EA study has been undertaken to demonstrate the environmental acceptability of the Project.

1.4.2 Mitigation measures have been recommended, where appropriate, to alleviate any identified environmental impacts or constraints during the operation of the Project. Potential environmental impacts during the construction phase, thought transient, have also been reviewed and mitigation measures have been recommended to reduce any identified environmental impacts to acceptable levels.

Figure 1-1: Site Location and its Environs

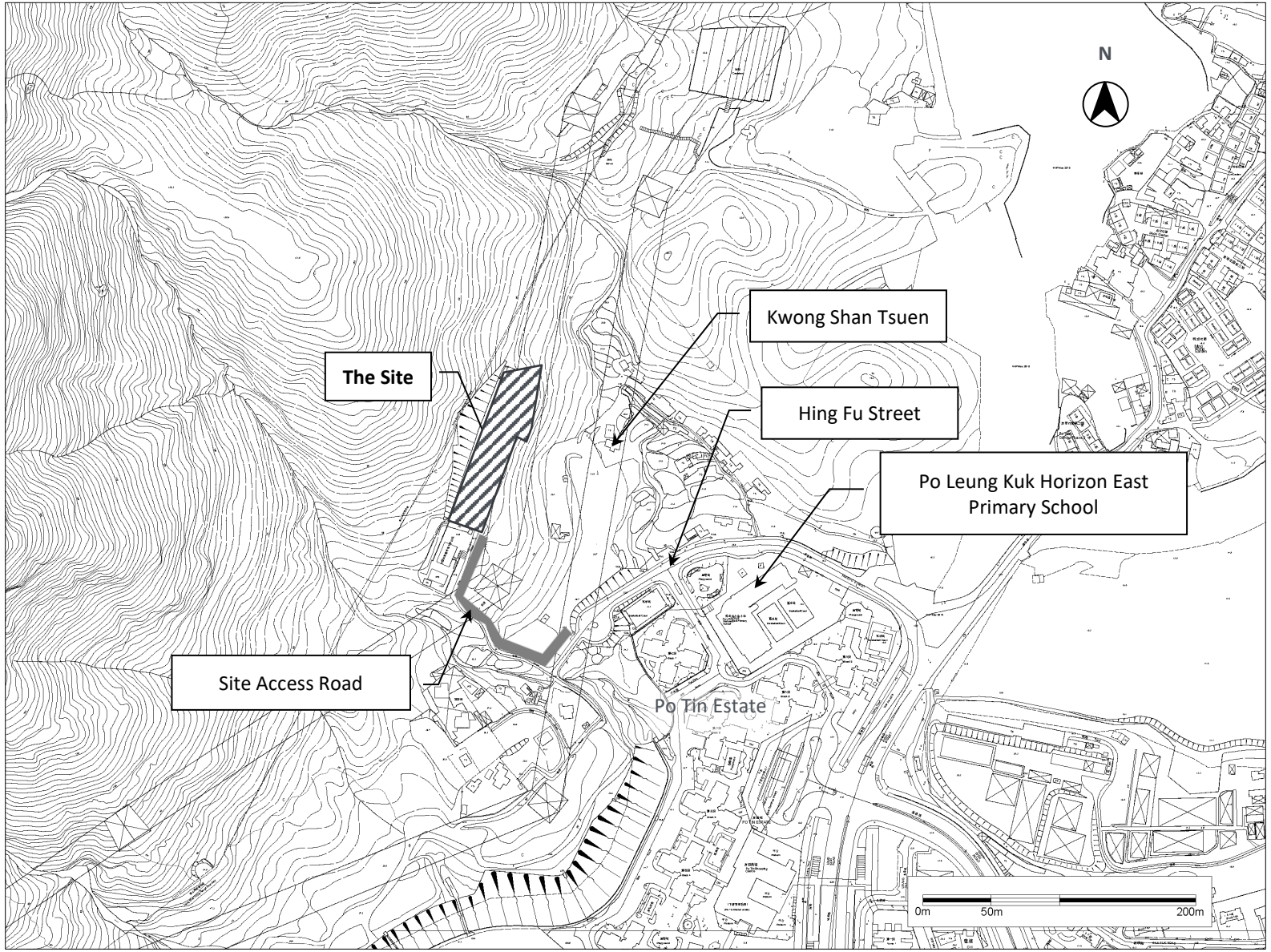
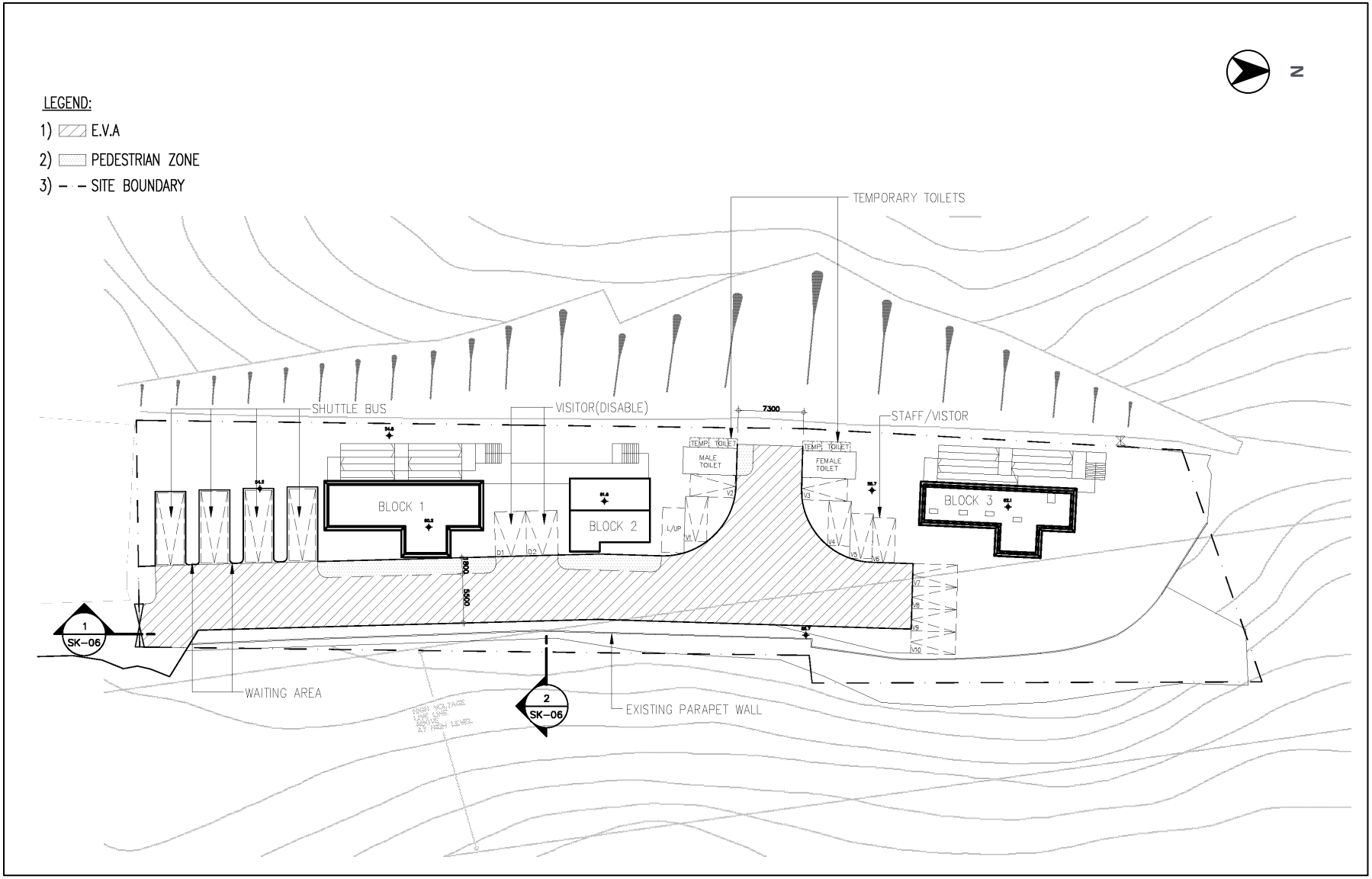


Figure 1-2: Master Layout Plan of the Project



2 AIR QUALITY REVIEW

2.1 Introduction

2.1.1 This section assesses the potential air quality impacts associated with the Project during minor renovation and continued operation of Tin Kwong Lun Yee. Mitigation measures are recommended, where necessary, as part of the assessment.

2.2 Environmental Legislation and Standards

Air Quality Objectives

2.2.1 The Air Quality Objectives (AQOs) established under the *Air Pollution Control Ordinance* (APCO) (Cap. 311) are given in ***Table 2-1*** below.

Table 2-1: Hong Kong Air Quality Objectives

Pollutant	Averaging Time	Concentration Limit [Note 1], µg/m^3	No. of Exceedance Allowed
Sulphur Dioxide (SO_2)	10-minutes	500	3
	24-hour	125	3
Respirable Suspended Particulates (PM_{10})[Note 2]	24-hour	100	9
	Annual	50	Not applicable
Fine Suspended Particulates ($PM_{2.5}$)[Note 3]	24-hour	75	9
	Annual	35	Not applicable
Nitrogen Dioxide (NO_2)	1-hour	200	18
	Annual	40	Not applicable
Ozone (O_3)	8-hour	160	9
Carbon Monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
Lead (Pb)	Annual	0.5	Not applicable

Notes:

1. All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.
2. Respirable suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.
3. Fine suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

Air Pollution Control (Construction Dust) Regulation

2.2.2 Enacted under Section 43 of the APCO, the *Air Pollution Control (Construction Dust) Regulation* defines notifiable and regulatory works for achieving the purpose of dust control for a number of activities.

2.2.3 The Regulation requires that any notifiable work[Ref. #1] shall give advance notice to the Environmental Protection Department (EPD), and the contractor shall ensure that the notifiable and regulatory works are carried out in accordance with the Schedule of the Regulation. Dust control and suppression measures are also provided in the Schedule.

2.2.4 No construction works including notifiable work will be carried out for the Project. Notwithstanding, other relevant dust control measures of the Air Pollution Control (Construction Dust) Regulation should be followed as far as practicable.

Air Pollution Control (Furnaces, Ovens and Chimneys) (Installation and Alteration) Regulations

2.2.5 Enacted under Section 43 of the APCO, the *Air Pollution Control (Furnaces, Ovens and Chimneys) (Installation and Alteration) Regulations* stipulate that a prior approval from EPD will be required if the total fuel consumption capacity of any fuel-burning equipment or its chimney on premises to be installed or altered exceeds (a) 25 litres (L) of conventional liquid fuel per hour; or (b) 35 kilograms (kg) of conventional solid fuel per hour; or (c) 1,150 megajoules (MJ) of any gaseous fuel per hour.

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

2.2.6 This Regulation takes effect on 1 June 2015 and requires Non-road Mobile Machinery (NRMM), except those exempted, to comply with the prescribed emission standards. From 1 September 2015, all regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Starting from 1 December 2015, only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites, container terminals and back up facilities, restricted areas of the airport, designated waste disposal facilities and specified processes.

Hong Kong Planning Standards and Guidelines (HKPSG)

2.2.7 The minimum buffer distances required between the relevant class of roads and active open spaces are recommended in Chapter 9 of the Environment of *Hong Kong Planning Standards and Guidelines* (HKPSG). The relevant buffer distances of HKPSG are summarised in ***Table 2-2*** for ease of reference.

Table 2-2: *HKPSG Minimum Setback Distances*

POLLUTANT	TYPE OF ROAD	BUFFER DISTANCE	PERMITTED USES
Road and Highways	Trunk Road and Primary Distributor	>20m	Active and passive recreation use
		3 – 20m	Passive recreational use
		<3m	Amenity areas
	District Distributor	>10m	Active and passive recreational use
		<10m	Passive recreational uses
	Local Distributor	>5m	Active and passive recreational use
		<5m	Passive recreational use
	Under Flyovers	-	Passive recreational use

Source: Adapted from Table 3.1 of Chapter 9 Environment of HKPSG.

1. Notifiable works include site formation, reclamation, demolition of a building, work carried out in any part of a tunnel that is within 100m of any exit to the open air, construction of the foundation of a building, construction of the superstructure of a building and road construction work.

2.3 Background Air Quality

2.3.1 The Site is surrounded by hillsides, trees, graves, temples, power pylon and overhead power line. Hing Fu Street and Hing Kwai Street are located to its east. No chimneys were identified within 500m of the Site during the visit conducted on 22 June 2018.

2.3.2 Hing Fu Street and Hing Kwai Street are the major public roads closest to the Site. They are located more than 118m and 330m from the Site respectively which are well within the buffer distances recommended in HKPSG.

2.3.3 Given the above, there are no major off-site/cumulative sources of air pollution in the background concentrations at the surrounding of the Site.

2.4 Assessment and Mitigation

Identification of Air Sensitive Receivers (ASRs)

2.4.1 Based on the Site visit conducted on 22 June 2018 and the information on the survey map, three representative Air Sensitive Receivers (ASRs) within an Air Quality Study Area of 500m from the Site boundary are identified, which are listed in ***Table 2-3*** and shown on ***Figure 2-1***.

Table 2-3: *Representative ASRs*

ASR NO.	DESCRIPTION	LAND USE	GROUND LEVEL (mPD)	APPROX. SHORTEST DISTANCE TO SITE BOUNDARY (m)
ASR1	Kwong Shan Tsuen	Residential	33.4	60
ASR2	Block 7 of Po Tin Estate	Residential	24.2	145
ASR3	Po Leung Kuk Horizon East Primary School	Institutional	20.1	180

Construction Phase

2.4.2 No major building construction or demolition works will be required for the Project since the buildings and structures that comprise the Project are already in place.

2.4.3 Dust control measures and good practice for controlling fugitive impacts will be implemented in accordance with the *Air Pollution Control (Construction Dust) Regulation*. Significant fugitive dust emission during the minor renovation works is not anticipated with proper implementation of dust control measures listed below:

- Works area for site clearance shall be sprayed with water before, during and after the operation so as to maintain the entire surface wet.
- Restricting heights from which materials are to be dropped, as far as practicable to minimise the fugitive dust arising from unloading/loading.
- Covering or water spraying Construction and Demolition (C&D) wastes generated from demolition by tarpaulin sheet should be provided for prevention of dust generation.
- Any stockpile of dusty materials shall be covered entirely by impervious sheeting; and/or placed in an area sheltered on the top and four sides.
- All dusty materials shall be sprayed with water immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.
- Regular maintenance of any plant and equipment shall be provided to minimise gaseous emissions.

2.4.4 The construction contractors shall also provide regular maintenance of any plant and equipment so as to minimise gaseous emissions.

2.4.5 With proper dust control measures as described above, significant fugitive dust impacts during the renovation phase are not anticipated.

Continued Operation

2.4.6 The potential air quality concerns that may arise during the operational phase of the Project include air emissions from vehicles and incense burners/joss paper burners.

Vehicle Emissions

2.4.7 ***Table 2-4*** summarises the road types and ***Figure 2-1*** shows their distances from the Site.

Table 2-4: *Types of Roads Surrounding the Site*

ROAD NAME	ROAD TYPE	HKPSG BUFFER DISTANCE (m)	DISTANCE FROM SITE BOUNDARY (m)
Hing Fu Street	Local Road	5	118
Hing Kwai Street	Local Road	5	330

2.4.8 As mentioned in ***paragraph 1.3.7***, shuttle buses will be provided between 8am and 5pm during festival periods. Only the visitors who will make reservation will be allowed to visit the Site via the shuttle buses. In order to have traffic control, not more than 16 shuttle buses per hour will be provided during festival periods.

2.4.9 As mentioned in ***paragraph 1.3.8***, no more than 10 visitors will visit the Site during non-festival periods as the Applicant advised. Therefore, limited vehicles will access the Site and no adverse air quality impact due to traffic emission is anticipated.

Emissions from Other Sources

2.4.10 As advised by the Applicant, visitors are not allowed to burn joss paper within the Site. In order to minimise adverse environmental impact during Ching Ming and Chung Yeung Festivals, offerings of water, flowers or fruit are encouraged.

2.4.11 Should joss paper burning be allowed in the future, then a smokeless joss paper furnace with high dust and smoke removal efficiency will be purchased, such as “Ching Yan” Eco-Furnace from the Hong Kong Productivity Council (HKPC) (see ***Appendix A***) or other equipment no less efficient from an equivalent supplier. The tentative operation hours of the smokeless joss paper furnace will be same as that of the Site (i.e. from 10am to 5pm during non-festival periods, and from 8am to 5pm during weekdays of festival periods except festival days and weekends of two weeks before/after the festival day) if it will be adopted in the future. The indicative location of the smokeless joss paper furnace is shown on ***Figure 2-2*** for reference.

2.4.12 The Applicant is committed to follow the good operation practice and administrative measures recommended in Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places published by EPD. This includes:

- Encourage visitors to adopt green worship, e.g. flower worshipping and fruit worshipping, etc.
- Try to arrange off-site burning as far as practicable, which the off-site burning facilities should be remote from air sensitive receivers with provision of proper joss paper furnaces and effective air pollution control equipment.
- If the above two items are not practicable and on-side joss paper burning is inevitable, the Applicant shall provide joss paper furnaces and effective air pollution control equipment to achieve no visible emissions and no environmental nuisance to achieve no visible emissions and no environmental nuisance are identified to nearby ASRs. Also, the following measures shall be provided and implemented:
  - Provide trained staff to operate the smokeless furnaces and prohibit visitors/ other people from operating the furnaces

- Ensure that the air pollution control equipment on the furnaces has been turned on prior to use and is operating properly
- Allow smokeless joss paper furnaces for use in memorial ceremonies upon request only
- Prohibit joss paper burning without the use of the smokeless joss paper furnaces
- Prohibit other usage of the smokeless joss paper furnaces
- Advise and encourage visitors to burn joss paper to be provided by the Applicant so as to control the quantity and quality of burning materials
- Provide guidance to visitors on minimising the quantity of burning materials and removing non-paper materials (such as plastic wrapping) before burning

2.5 Conclusions

2.5.1 The contractor for the minor construction works shall implement dust control measures in accordance with the requirements of the *Air Pollution Control (Construction Dust) Regulation*. The construction contractor shall also provide regular maintenance of all the plants and equipment so as to minimise gaseous emissions. With the implementation of these mitigation measures, there should be no adverse air quality impacts during the construction phase of the Project.

2.5.2 During operation, there will be insignificant emissions from vehicles transporting visitors to the Site. On-site joss paper burning is currently not allowed, but if the Applicant considers allowing this in the future, then smokeless joss paper furnaces with dust control measures shall be installed and the recommendations in EPD's *Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places* shall be followed. Therefore, no adverse air quality impact is anticipated during the operation phase of the Project.

2.5.3 Overall, therefore, no adverse air quality impact from the minor works or from the continued operation of Tin Kwong Lun Yee is anticipated.

Figure 2-1: Location of Representative ASRs

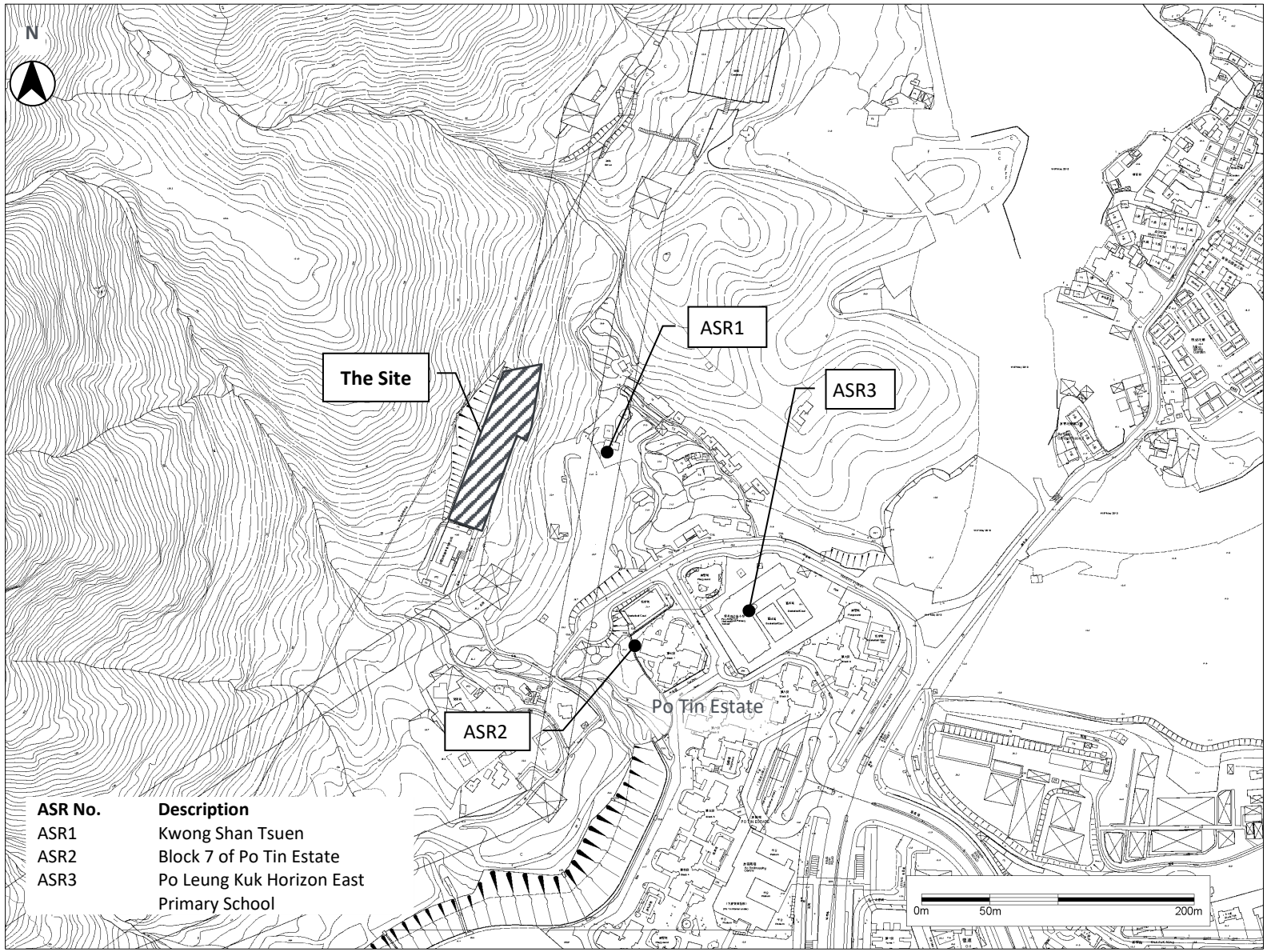
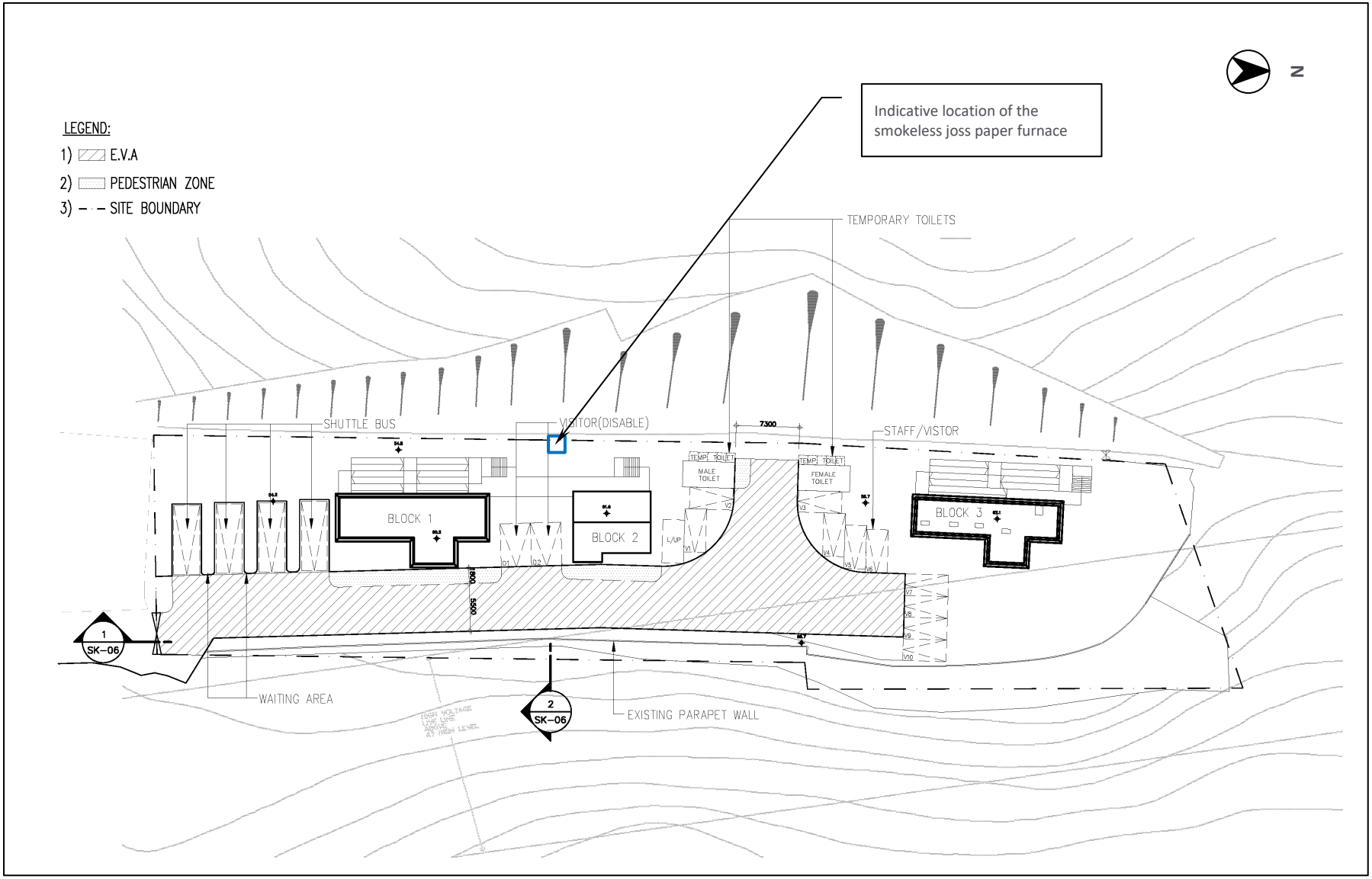


Figure 2-2: Indicative Location of the Smokeless Joss Paper Furnace (if provided in future)



3 NOISE

3.1 Introduction

3.1.1 This section assesses the potential noise impacts generated by the Project during minor renovation and continued operation of Tin Kwong Lun Yee. Mitigation measures are recommended as part of the assessment, where necessary.

3.2 Environmental Legislation and Standards

Noise Control Ordinance (Cap. 400)

3.2.1 The main piece of legislation controlling environmental noise impact is the *Noise Control Ordinance* (NCO). The NCO enables regulations and Technical Memoranda (TMs) to be enacted, which introduce detailed control criteria, measurement procedures and other technical matters. Environmental noise is governed under the following TMs:

- Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM)
- Technical Memorandum on Noise from Percussive Piling (PP-TM)
- Technical Memorandum on Noise from Construction Work in Designated Areas (DA-TM)
- Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites (IND-TM)

3.2.2 According to EPD's Plan No. EPD/AN/NT-03 for Tuen Mun, Sham Tseng and Ma Wan, the Site is entirely located outside a Designated Area (DA) and so the DA-TM is not applicable.

3.2.3 A Construction Noise Permit (CNP) must be obtained by the contractor for any percussive piling at any time. CNP must also be obtained for the use of any Powered Mechanical Equipment (PME) within restricted hours as defined in the NCO (for all days 7pm to 7am the next day and at all times on general holidays or Sundays).

3.2.4 In addition to a CNP, hand-held breakers having a mass of above 10kg and any air compressor capable of supplying compressed air at 500kPa or above for carrying out construction work must be fitted with a Noise Emission Label (NEL) issued under the *Noise Control (Hand-held Percussive Breakers) Regulation* and the *Noise Control (Air Compressors) Regulation* of the NCO.

3.2.5 There is no statutory control for noise arising from construction activities (other than percussive pilling) during normal working hours (7am to 7pm from Monday to Saturday, not including general holidays). Nevertheless, *Professional Persons Environmental Consultative Committee (ProPECC) Practice Note PN2/93 Noise from Construction Activities – Non-statutory Controls* (ProPECC PN2/93) recommends the noise criteria as shown in ***Table 3-1*** and guideline to minimise the potential construction noise impact during normal working hours.

Table 3-1: Construction Noise Criteria for Non-Restricted Hours

NOISE SENSITIVE USE	$L_{EQ\ (30\ MIN)}$ NOISE CRITERIA BETWEEN 0700 AND 1900 ON ANY DAY NOT BEING A SUNDAY OR GENERAL HOLIDAY
Dwellings	75 dB(A)
School	70 dB(A) (or 65 dB(A) during examination)

3.2.6 For fixed plant noise during operation phase, the requirements of IND-TM shall be complied with. Table 2 of IND-TM stipulates the day, evening and night time Acceptable Noise Levels (ANLs) for Noise Sensitive Receivers (NSRs) according to the corresponding Area Sensitive Rating (ASR), which is determined by Influencing Factors (IFs) in accordance with the IND-TM. These are summarised in ***Table 3-2***.

Table 3-2: Acceptable Noise Levels for Fixed Noise Source

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

Hong Kong Planning Standards & Guidelines (HKPSG)

3.2.7 As recommended in Table 4.1 of Chapter 9 Environment of HKPSG, the standards for road traffic noise in terms of $L_{10\ (1\text{-hr})}$ of the following uses relying on opened windows for ventilation are:

- 70 dB(A) for all domestic premises including temporary housing accommodation (residential); hotels and hostels; and offices.
- 65 dB(A) for educational institutions, including kindergartens, child care centres and all others where unaided voice communication is required (school); places of public worship; and courts of law.
- 55 dB(A) for hospitals, clinics, convalescence homes; and residential care homes for the elderly.

3.2.8 The Site is located in a rural area and, similar to other noise sensitive uses within this area, it is not subject to any major noise sources. Nevertheless, the requirements of Table 4.1 of Chapter 9 of HKPSG shall be followed:

(a) 5 dB(A) below the appropriate Acceptable Noise Levels (ANLs) shown in Table 2 of TM-IND, and
(b) the prevailing background noise levels.

3.3 Assessment and Mitigation

Identification of Noise Sensitive Receivers (NSRs)

3.3.1 Based on the Site observations on 22 June 2018 and the information on the survey map, representative Noise Sensitive Receivers (NSRs) within a Noise Study Area of 300m from the boundary of the Site are listed in ***Table 3-3*** and shown on ***Figure 3-1***.

Table 3-3: *Representative NSRs*

NSR NO.	DESCRIPTION	LAND USE	GROUND LEVEL (mPD)	APPROX. SHORTEST DISTANCE TO SITE BOUNDARY (m)
NSR1	Kwong Shan Tsuen	Residential	33.4	60
NSR2	Block 7 of Po Tin Estate	Residential	24.2	145
NSR3	Po Leung Kuk Horizon East Primary School	Institutional	20.1	180

3.3.2 The majority of representative NSRs identified are quite distant from the Site, although the closest is NSR 1, which is more than 60m from the Site boundary. The Site itself is remote and not subject to any major noise sources.

Renovation

3.3.3 No major construction work or demolition works will be required for the Project since the buildings and structures that comprise the Project are already in place.

3.3.4 The Contractor shall use quiet plant as far as practicable and implement good site practices in order to minimise construction noise emissions. Typical noise mitigation measures are summarised below:

- Only well-maintained plant should be operated on site;
- Plant should be turned off or throttled down when not in use;
- Plant that is known to emit noise more dominant in one direction should be oriented to avoid that noisy side of the plant facing to NSRs;
- Silencers, mufflers and enclosures should be installed to plants if needed and maintained adequately throughout the works;

3.3.5 With implementation of noise mitigation measures, adverse noise impact is not anticipated during the renovation works.

Continued Operation

3.3.6 The columbarium operates daily including weekends and public holidays, except Ching Ming and Chung Yeung Festival Day and the weekend of two weeks before/after the Festival day. The operating hours of the Project will be from 1000 to 1700 during non-festival periods and from 0800 to 1700 during festival periods. Sources of potential noise impacts during the operation of the development include the operation of building services equipment (BS) special religious ceremonies/activities.

Operation of Building Services (BS) Equipment

3.3.7 The outdoor BS equipment include split-type air conditioners only which are currently installed, from which the noise impact is negligible. The other BS equipment such as water pumps are fully enclosed. In addition, these are fully screened from NSRs by building structures within the Site and the surrounding topography. Therefore, the noise impact will be minimal.

Operation of Smokeless Joss Paper Furnace (if any)

3.3.8 As mentioned in ***paragraph 2.4.10***, visitors are not allowed to burn joss paper within the Site. Should joss paper burning be allowed in future, a smokeless joss paper furnace with high dust and smoke removal efficiency will be purchased, such as “Ching Yan”Eco-Furnace from the Hong Kong Productivity Council (HKPC) (see ***Appendix A***) or other equipment no less efficient from an equivalent supplier. The major noise sources of such furnace include the water pumps, fans and scrubber which significant noise impact due to these noise sources is not anticipated. When necessary, such noise impact can be effectively mitigated by the measures such as isolators, noise barriers/enclosures, etc. In addition, the closest NSR1 Kwong Shan Tsuen is approximately 60m from the Site boundary as indicated in ***Table 3-3***. Therefore, adverse noise impact due to the smokeless joss paper furnace (if any) with the provision of noise mitigation measures (if required) is not anticipated.

3.3.9 If smokeless joss paper furnace will be provided in future, a Noise Assessment Report prepared by a qualified engineer or consultant as required in Annex 10 of the *Application Guide and Forms for Licence and other Specified Instruments* shall be submitted and approved by the Private Columbaria Licensing Board (PCLB) prior to operating the furnace. The requirements of noise mitigation measures shall be recommended in the Noise Assessment Report.

3.3.10 With provision of noise mitigation measures to be recommended in the aforementioned Noise Assessment Report to be approved by the PCLB and at least 60m separation between the Site boundary and the NSRs, adverse noise impact due to the smokeless joss paper furnace is not anticipated.

Religious Ceremonies/Activities

3.3.11 As the Site will be used for peaceful, quiet contemplation and only small scale of religious ceremonies/activities would be allowed to be carried out inside building structure during non-

festival periods upon request. No outdoor ceremonies/activities will be allowed with the Site. Therefore, no adverse noise impact on the nearby NSRs is anticipated.

Traffic Noise Impacts

3.3.12 Noise impact due to vehicular access to the Site is negligible during non-festival periods due to the minimal number of visitors.

3.3.13 With reference to the Traffic Impact Assessment (TIA) Report supporting this Planning Application, approximately 16 vehicle per hour (veh/hour) for shuttle bus and 4 veh/hour for car/taxi, i.e. 20 veh/hour in total, will be generated by the Proposed Development to and from (or IN and OUT) the Site and Siu Hong MTR Station via the roads including Ming Kum Road, Tsing Tin Road and Tuen Mun Road during the peak hour of the festival period. Considering the traffic flows of the major roads between the Site and Siu Hong MTR Station will not be significantly increased, significant traffic noise impact on the surrounding noise sensitive receivers is not anticipated, except the NSR 1 to NSR 3 on Hing Fu Street.

3.3.14 For NSR 1 to NSR3, Hing Fu Street is the only dominant traffic noise source. Because the traffic flow arising from the Project will mainly pass along Hing Fu Street while the prevailing traffic flow of High Fu Street is not high with reference to the TIA Report, the traffic noise levels at NSR 1 to NSR3 due to Hing Fu Street have been estimated by using the Calculation of Road Traffic (CRTN) and compared with the traffic noise criteria recommended by the Hong Kong Planning Standards and Guidelines (HKPSG). The estimated $L_{10(1\text{-hour})}$ levels shown in ***Table 3-4*** below would not exceed the criteria recommended in HKPSG.

Table 3-4: Estimated Peak Hour Traffic Noise Levels in 2028

DESCRIPTION	NSR1		NSR2		NSR3	
	AM	PM	AM	PM	AM	PM
Traffic Flow of Hing Fu Street (q), veh/hour	76	64	76	64	76	64
Percentage Heavy Vehicle (*p*), %	22.3	26.8	22.3	26.8	22.3	26.8
Speed Limit (V), km/hour	50	50	50	50	50	50
Horizontal Distance (d), m	92	92	32	32	8	8
Height of NSR above Road, m	10	10	5	5	5	5
Slant Distance (d'), m	96.0	96.0	35.8	35.8	12.3	12.3
Angle of View (θ), °	180.0	180.0	180.0	180.0	180.0	180.0
Basic Noise Level $L_{10(1\text{-hour})}$, dB(A)	61.0	60.3	61.0	60.3	61.0	60.3
Correction for V and p, dB(A)	2.3	2.9	2.3	2.9	2.3	2.9
Correction for Distance, dB(A)	-8.5	-8.5	-4.2	-4.2	0.3	0.3
Correction for θ, dB(A)	0.0	0.0	0.0	0.0	0.0	0.0
Correction for Low Flow, dB(A)	0.0	0.0	0.0	0.0	-1.1	-1.6
Correction for Road Surface, dB(A)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Correction for Façade, dB(A)	2.5	2.5	2.5	2.5	2.5	2.5
Overall Estimated $L_{10(1\text{-hour})}$, dB(A)	**56**	**56**	**60**	**60**	**64**	**63**
HKPSG $L_{10(1\text{-hour})}$ Criteria, dB(A)	70	70	70	70	65	65
Compliance with HKPSG?	Yes	Yes	Yes	Yes	Yes	Yes

Notes:

1. Peak hour traffic flow and percentage heavy vehicle of Hing Fu Street are calculated based on the TIA Report.
2. The heights of NSR above road are indicated based on the survey maps and site observations.
3. Hing Fu Street is generally flat and so no gradient correction is assumed.

3.3.15 Overall, therefore, no adverse traffic noise impact to the Site from the nearby public road is anticipated.

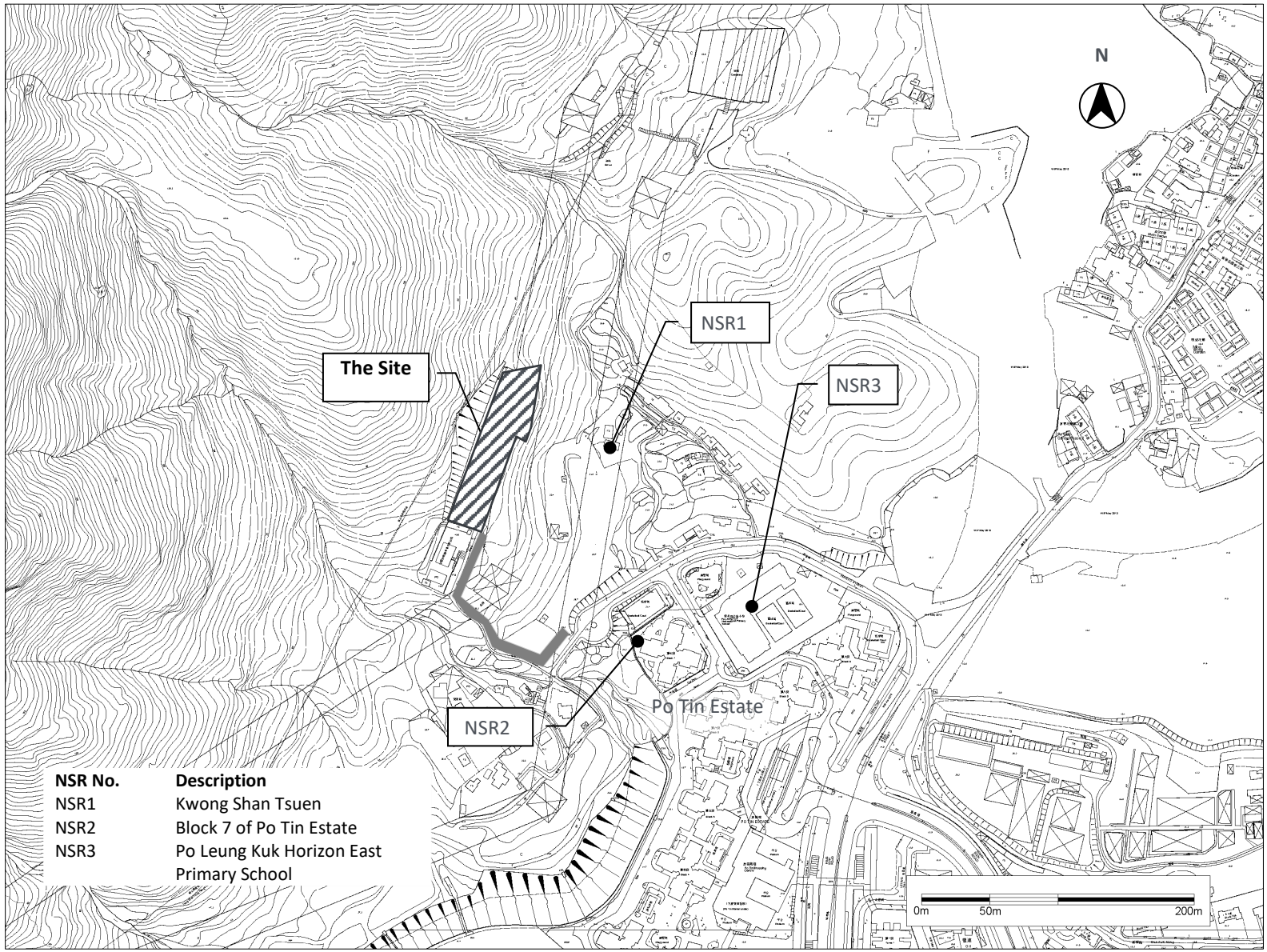
3.4 Conclusions

3.4.1 Significant off-site noise impacts are not anticipated. Nevertheless, mitigation measures and good site practices will be implemented as far as practicable in accordance with ProPECC PN2/93. Therefore, no adverse noise impact is anticipated during the renovation phase of the Project.

3.4.2 During continued operation of Tin Kwong Lun Yee, no adverse traffic noise impacts are anticipated. Operational noise from BS equipment, such as split-type air conditioners, will not be significant and the noise impact to off-site NSRs will be minimal. As mentioned in ***paragraph 3.3.9***, if smokeless joss paper furnace will be provided in future, a Noise Assessment Report prepared by a qualified engineer or consultant as required in Annex 10 of the *Application Guide and Forms for Licence and other Specified Instruments* shall be submitted and approved by the Private Columbaria Licensing Board (PCLB) prior to operating the furnace. The requirements of noise mitigation measures shall be recommended in the Noise Assessment Report. Although the qualifications of the aforementioned engineer/consultant are not specified in the aforementioned Guide, the qualified engineer/consultant should be a Member of Hong Kong Institute of Acoustics (MHKIOA), a Member of Institute of Acoustics in the UK (MIOA) or equivalent.

3.4.3 Overall, therefore, no adverse noise impact from the minor renovation works or from the continued operation of the Project is anticipated.

Figure 3-1: Location of Representative NSRs



4 WATER QUALITY

4.1 Introduction

4.1.1 This section addresses the potential water quality impacts arising from the Project during minor renovation and continued operation of Tin Kwong Lun Yee. Mitigation measures are recommended, where necessary, as part of the assessment.

4.2 Environmental Legislation and Standards

Water Pollution Control Ordinance (Cap. 358)

4.2.1 An amendment to the *Water Pollution Control Ordinance* (WPCO) was enacted in 1990 and provides a mechanism for setting effluent standards. These are included in the *Technical Memorandum Standards for Effluents Discharged in to Drainage and Sewerage Systems, Inland and Coastal Waters (WPCO Cap 358, S.21)*. All discharges into government sewerage systems, storm water drainage systems, marine and inland waters are required to comply with the standards stipulated in the Technical Memorandum.

Construction Site Drainage, ProPECC PN1/94

4.2.2 Under *ProPECC Practice Note PN1/94 Construction Site Drainage* (ProPECC PN1/94), various guidelines for the handling and disposal of construction site discharges are included. The guidelines include the use of sediment traps, wheel washing facilities for vehicles leaving the site, adequate maintenance of drainage systems to prevent flooding and overflow, sewage collection and treatment, and comprehensive waste management (collection, handling, transportation, and disposal) procedures.

4.3 Assessment

Renovation

4.3.1 No major building construction or demolition works will be required for the Project since the building and structures of the Project are already in place.

4.3.2 Silt from any on-site stockpiles may cause water quality impacts if not properly controlled. These impacts would be in the form of increased amounts of suspended solids entering the local drainage system.

4.3.3 These potential water quality impacts can be controlled via the following ways:

- Minimisation of runoff;
- Prevention or minimisation of the likelihood of the identified pollutants being in contact with rainfall or runoff; and
- Measures to abate pollutants in the stormwater runoff.

4.3.4 The construction contractor shall apply for a Discharge Licence from EPD under the WPCO, if necessary. Good practice for dealing with site discharges should be implemented in accordance with ProPECC PN 1/94. All site discharges should be treated as necessary in accordance with the terms and conditions of any Discharge Licence.

4.3.5 With the implementation of the above mitigation measures, water pollution from the minor renovation works will be minimal.

Continued Operation

Sewage from Toilets

4.3.6 There is currently no public sewerage connection at the Site and there are no immediate plans by the government to extend the nearby sewerage system to the Site in the near future. Nevertheless, the Applicant confirms that all wastewater will be collected, treated and disposed of in accordance with the WPCO.

4.3.7 Taking into consideration the small quantity of sewage that would be generated from the Project during non-festival periods, the treatment technology, cost and ease of maintenance of the treatment options, a septic tank/soakaway system to be designed and constructed based on Appendix D of EPD Practice Note for Professional Persons ProPECC PN5/93 on Drainage Plans including the minimum clear distance between drains of 900mm will be used for handling sewage generated during operation. The design of the septic tank/soakaway system shall be duly certified by an Authorised Person (AP) registered by the Building Authority. On a need basis, portable toilets can also be provided during festival periods to address an anticipated increase in quantity of sewage generated.

4.3.8 Regular maintenance and desludging of the septic tank will be required to avoid overflow and to maintain optimum treatment efficiency. The capacity of septic tank shall be sufficient for one day storage of wastewater to avoid overflow. The portable toilets should be maintained by specialist contractor and the collected sewage should be regularly taken off-site for treatment during the festival periods.

4.3.9 With the provision of a septic tank for the development, and additional portable toilets for use during the festival periods, no adverse water quality impacts are anticipated from the operation of the development.

Wastewater from Smokeless Joss Paper Furnace (if provided in future)

4.3.10 As mentioned in ***paragraph 2.4.10***, visitors are not allowed to burn joss paper within the Site. Should joss paper burning be allowed in future, a smokeless joss paper furnace with high dust and smoke removal efficiency will be purchased, such as “Ching Yan” Eco-Furnace from the Hong Kong Productivity Council (HKPC) (see ***Appendix A***) for other equipment no less efficient from an equivalent supplier.

4.3.11 The details of smokeless joss paper furnace are not known at this stage since there is no plan to allow joss paper burning. Nevertheless, as assessed in the Sewage Impact Assessment (SIA) Report supporting this planning application, the quantity of wastewater arising from smokeless joss paper furnace is estimated based on the following assumptions:

1. One smokeless joss paper furnace as shown in ***Appendix A*** will be provided on-site.
2. Approximately 400 ℓ/day of wastewater will be arising from a smokeless joss paper furnace as advised by the supplier, Hong Kong Productively Council (HKPC).

4.3.12 For a better arrangement the wastewater arising from the furnace will be temporarily stored in a wastewater storage tank with a total capacity of 12m^3 or three number of wastewater storage tanks with a capacity of 4m^3 for each. The stored wastewater will be tankered away by a licensed collector when necessary. The indicative location of the smokeless joss paper furnace and the wastewater storage tank can be referred to ***Figure 4-1***. Accessibility for the licensed collectors to reach the location of sewage hold tank is allowed. In addition, regular tank checking and maintenance should be carried out to prevent leakage or spill from the wastewater storage tank. Second containment with corrosion resistant liners could be adopted to prevent any leakage.

Surface Runoff from the Use of Fertilisers and Pesticides

4.3.13 Potential contamination source of surface runoff may be arising from the use of fertilisers and pesticides during operation phase. It is recommended that environmental-friendly fertilisers and pesticides will be adopted for the plantings on-site. The types of fertilisers and pesticides to be used will make reference to the guidelines published by the Agriculture, Fisheries and Conservation Department (AFCD) including "*Good Agriculture Practices for Crop Production: Farm Operation – Use of Fertilizers*". In addition, whenever pesticides or fertiliser will be applied on planting on-site, the dosage applied should be followed according to the manufacturer's recommended application dosage. Any agrochemical application on planting should be avoided before heavy rain in order to protect the water quality of the watercourses nearby.

4.4 Conclusions

Construction Phase

4.4.1 The potential water quality impacts arising from the minor construction activities of the Project can be controlled by adopting good practice in accordance with *ProPECC PN 1/94*. The construction contractor shall also apply for a Discharge Licence from EPD under the WPCO, if necessary.

4.4.2 With the above measures in place, no unacceptable water quality impact during the construction phase is anticipated.

Operation Phase

4.4.3 There is currently no public sewerage connection at the Site, and there are no immediate plans by the Government to extend the existing sewerage system nearby to the Site. Nevertheless, the Applicant confirms that all wastewater will be collected, treated and disposed of in accordance with the WPCO.

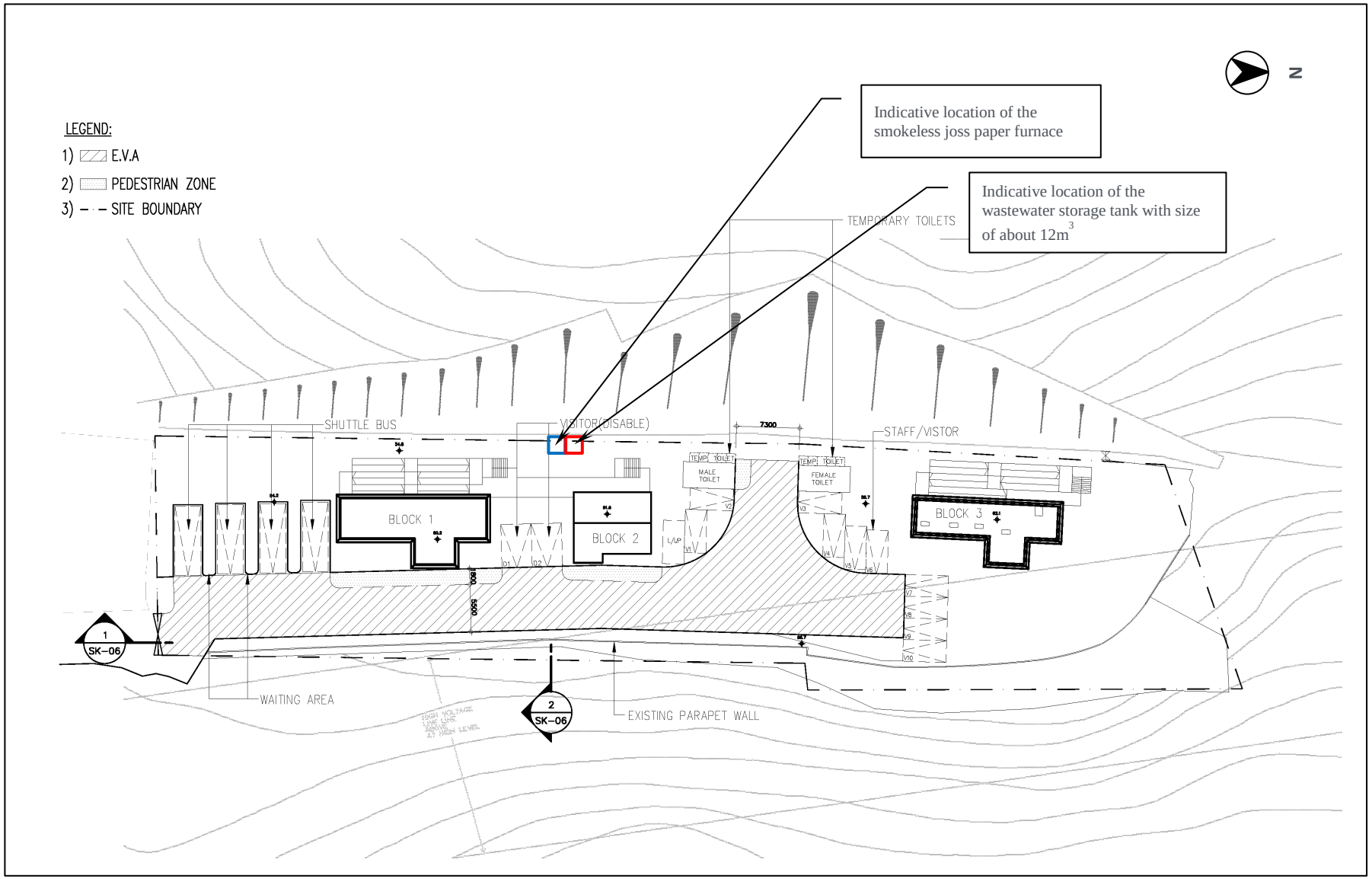
4.4.4 Because only small quantities of sewage will be generated during non-festival periods, a septic tank may be used for treating sewage. On a need basis, portable toilets can also be provided during festival periods to address an anticipated increase in quantity of sewage generated.

4.4.5 During continued operation of Tin Kwong Lun Yee, with the provision and regular maintenance of the above-mentioned sewage treatment facilities, no adverse water quality impacts are anticipated from the upgraded toilets and septic tank/soakaway pit to be installed. The septic tank/soakaway pit shall be designed and constructed with reference to ProPECC PN5/93 and duly certified by an AP as mentioned in ***paragraph 4.3.7***. The location of the wastewater storage tank is shown on ***Figure 4-1***. In addition, all good site practices as stated in ProPECC PN5/93 should be followed or implemented for the design of the on-site drainage system in order to convey surface runoff, from particularly the covered area, car parking area, access road.

4.4.6 As mentioned in ***paragraph 4.3.10***, visitors are not allowed to burn joss paper within the Site. Should joss paper burning be allowed in future, a smokeless joss paper furnace with high dust and smoke removal efficiency will be purchased, such as "Ching Yan" Eco-Furnace from the Hong Kong Productivity Council (HKPC) (see ***Appendix A***) for other equipment no less efficient from an equivalent supplier. For a better arrangement the wastewater arising from the furnace will be temporarily stored in a wastewater storage tank with a total capacity of $8m^3$. The stored wastewater will be tankered away by a licensed collector when necessary.

4.4.7 Overall, therefore, no adverse water quality impact from the minor renovation works or from the continued operation of Tin Kwong Lun Yee is anticipated.

Figure 4-1: Indicative Location of Smokeless Joss Paper Furnace and Wastewater Storage Tank (if provided in future)



5 WASTE MANAGEMENT

5.1 Introduction

5.1.1 This section addresses the waste management implications associated with the Project during minor renovation and continued operation of Tin Kwong Lun Yee. Mitigation measures are recommended, where necessary, as part of the assessment

5.2 Environmental Legislation and Standards

5.2.1 In carrying out the assessment, references have been made to the following relevant legislation, documents and guidelines that are applicable to waste management and disposal in Hong Kong:

- The Waste Disposal (Amendment) Ordinance (Cap. 354) (WDO) and subsidiary legislation such as the Waste Disposal (Chemical Waste) (General) Regulation sets out requirements for the storage, handling and transportation of all types of wastes, and subsidiary legislation such as Waste Disposal (Charges for Disposal of Construction Waste) Regulation and the Waste Disposal (Chemical Waste) (General) regulation.
- ETWB Technical Circular (Works) No. 19/2005, Environmental Management on Construction Sites.
- ETWB Technical Circular (Works) No. 22/2003A, Additional measures to improve Site Cleanliness and Control Mosquito Breeding on Construction Sites.
- Development Bureau (DEVB) Technical Circular (Works) No. 6/2010, Trip ticket system for Disposal of Construction & Demolition Materials.

5.3 Assessment and Mitigation

Renovation

5.3.1 No major building construction or demolition works will be required for the Project since the buildings and structures that comprise the Project are already in place.

5.3.2 The amount of Construction and Demolition (C&D) waste to be generated from the minor construction works is estimated at less than 10 tonnes. Any C&D waste that cannot be reused within the Site and will be disposed of at a public fill reception facility or at a landfill operated by government.

5.3.3 The key potential waste sources during the minor construction works are:

- Inert Construction and Demolition (C&D) materials (e.g. concrete and bricks);
- Non-inert C&D Waste (e.g. wood and plastics);
- Chemical wastes from vehicles/plant maintenance; and
- General refuse generated by site workers.

5.3.4 Insignificant C&D wastes are likely generated from the construction activities in the view of the small scale of the works. On-site waste management should be implemented to sort and separate inert and non-inert wastes prior to disposal.

5.3.5 Spent lubricants which are chemical wastes may be generated, though in small quantity in view of the small scale works.

5.3.6 Nevertheless, a licensed collector shall be employed to handle and dispose of the chemical wastes, if any. Furthermore, any chemical waste should be handled in accordance with EPD's *Code of Practice on the Packaging, Labelling and Storage Chemical Waste*.

5.3.7 General refuse generated by site workers will be disposed of regularly along with the existing Municipal Solid Waste (MSW) generated from the Site so as to avoid creating odour impact or pest and vermin problems within the Site.

5.3.8 The following good site practice is recommended:

- The construction contractor should adopt good housekeeping practices, such as waste segregation prior to disposal. Besides the provision of stockpiling and segregating areas within the site, effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating odour impact or pest and vermin problems. Waste storage areas should be well maintained and cleaned regularly.
- General refuse, or MSW, should be stored in enclosed bins or compaction units. A waste collector will be used by the contractors to remove MSW from the Site. Preferably an enclosed and covered area should be provided to reduce the occurrence of windblown materials.

5.3.9 With the above measures in place, no unacceptable waste management impact during the construction phase is anticipated.

Continued Operation

5.3.10 MSW mainly comprising general refuse is the major type of waste to be generated from the continued operation of Tin Kwong Lun Yee. Since no commercial catering service will be provided, no significant amount of food waste will be generated. Refuse is stored in enclosed bins. When full, these bins are emptied at the nearby Refuse Collection Point.

5.3.11 With the above-mentioned MSW handling, no adverse waste management impact is anticipated.

5.4 Conclusions

5.4.1 Only minor renovation works will be required for the Project. The quantity of construction waste arising from these minor works is anticipated to be minimal.

5.4.2 During continued operation of Tin Kwong Lun Yee, the MSW will be disposed of at a nearby Refuse Collection Point.

5.4.3 Overall, therefore, no adverse waste management implications have been identified from the minor renovation works or from the continued operation of Tin Kwong Lun Yee.

6 CONCLUSIONS

6.1.1 Tin Kwong Lun Yee (天罡隆義) is a branch of Vajrayana in Taiwan stream from the Tibetan Buddhism, which located at Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744 H in D.D. 132, Tuen Mun (the Site), which from "Green Belt" ("GB") to "Government, Institution or Community (G/IC)".

6.1.2 Potential environmental impacts that may arise from the construction and operation of the Tin Kwong Lun Yee religious institution have been assessed and appropriate mitigation measures are recommended to support the current rezoning application.

6.1.3 The contractor for the minor construction works shall implement dust control measures in accordance with the requirements of the APCO (Construction Dust) Regulation. The construction contractor shall also provide regular maintenance of any plant and equipment so as to minimise gaseous emissions. With the implementation of these mitigation measures, there should be no adverse air quality impacts during the construction phase of the Project. During operation, there will be insignificant emissions from vehicles transporting visitors to the Site. On-site joss paper burning is currently not allowed, but if the Applicant considers allowing this in the future, then smokeless joss paper furnaces with dust control measures shall be installed and the recommendations in EPD's Guidelines on *Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places* will be followed. Therefore, no adverse air quality impact is anticipated during the operational phase of the Project.

6.1.4 No adverse construction noise impact will be anticipated with the implementation of noise mitigation measures during minor construction works. No adverse noise impact due to traffic, fixed noise sources or religious ceremonies/activities will be anticipated during the operation of the Site because of insignificant increase in traffic generation, split-type air conditioners which are the only outdoor BS equipment and no outdoor religious ceremonies/activities on site. As reviewed in ***paragraphs 3.3.8*** to ***3.3.10***, the noise impact due to smokeless joss paper furnace, if provided in future, will not be significant. As concluded in ***paragraph 3.4.2***, if smokeless joss paper furnace will be provided in future, a Noise Assessment Report prepared by a qualified engineer or consultant as required in Annex 10 of the *Application Guide and Forms for Licence and other Specified Instruments* shall be submitted and approved by the Private Columbaria Licensing Board (PCLB) prior to operating the furnace. The requirements of noise mitigation measures shall be recommended in the Noise Assessment Report.

6.1.5 The potential water quality impacts arising from the minor construction activities of the Project can be controlled by adopting good practice in accordance with ProPECC PN 1/94. The construction contractor shall also apply for a Discharge Licence from EPD under the WPCO, if necessary. There is currently no public sewerage connection at the Site, and there are no immediate plans by the Government to extend the existing sewerage system nearby to the Site. Nevertheless, the Applicant confirms that all wastewater will be collected, treated and disposed of in accordance with the WPCO. During operation, because only small quantities of sewage will be generated during non-festival periods, the existing septic tank and soakaway pit system may be used for treating sewage. On a need basis, chemical toilets or portable toilets can also be provided during festival periods to address an anticipated increase in quantity of sewage generated. The wastewater generated from the operation of the smokeless joss paper furnace will be stored in a wastewater storage tank with size of about $8m^3$. The wastewater stored will be collected and tankered away by a licenced contractor when necessary. With the provision and regular maintenance of the above-mentioned sewage treatment facilities, no adverse water quality impact is anticipated during operation of the Project.

6.1.6 There is no evidence to suggest that there have been potentially contaminating activities carried out at this Site in the past and therefore no suggestion that the land may be contaminated. MSW generated by site workers during the construction stage will be disposed of regularly to

avoid creating odour impact or pest and vermin problems. With the above measures in place, no unacceptable waste management impact during the construction phase is anticipated. During the operation, the only major type of waste that will be generated is MSW, which will be collected and disposed of regularly. As such, no adverse waste impact is anticipated during the operation phase and no mitigation measures are considered to be necessary.

6.1.7 With the implementation of the recommended mitigation measures and the adoption of good site practice, the findings of this Environmental Assessment study demonstrate the environmental acceptability of the development in terms of both construction and operation.

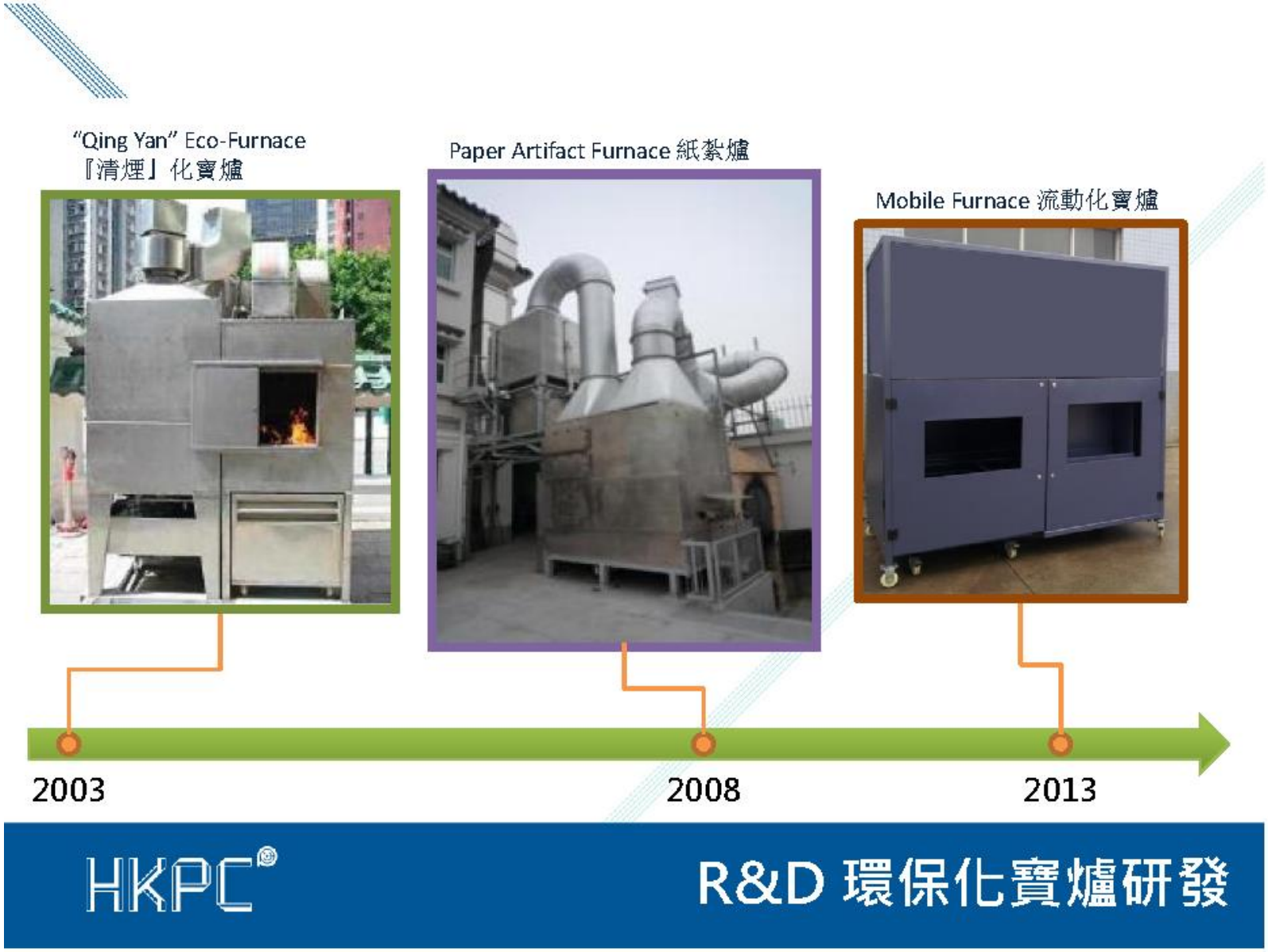
Appendix A SMOKELESS FURNACE CATALOGUE FROM HKPC

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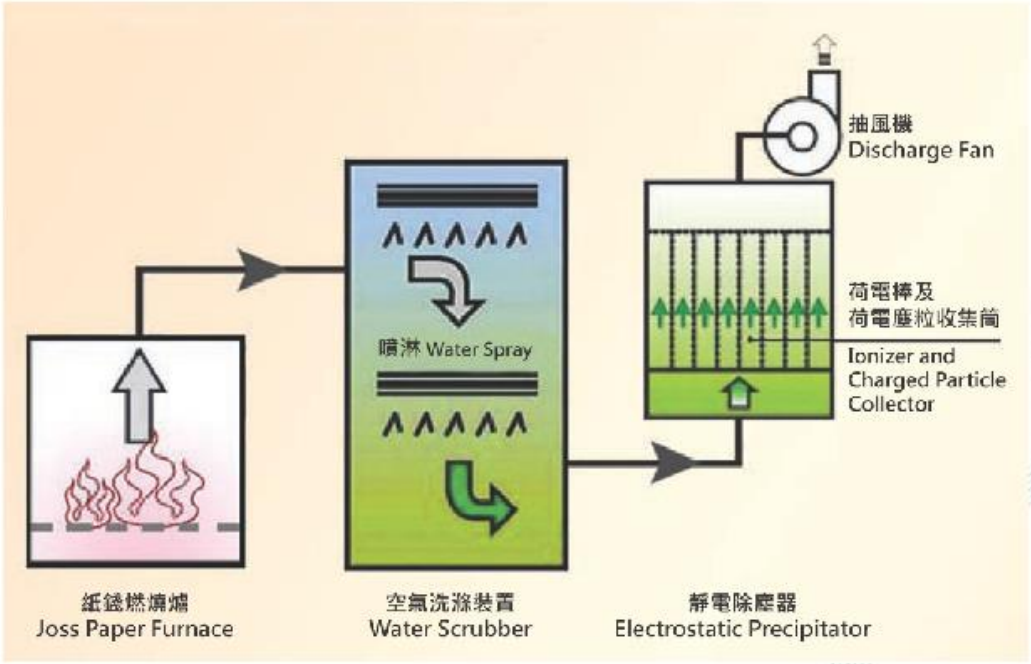
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處理量	每小時40公斤
設備尺寸	1800(W) x 1800(D) x 2900mm(H)
燃燒室尺寸	內部：700(W) x 800(D) x 1100mm(H) 爐口：600(W) x 400mm(H)
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14.	大埔醫院	醫院管理局	2011
15.	沙田醫院	醫院管理局	2011
16.	沙田威爾斯親王醫院	醫院管理局	2012
17.	秀茂坪天后廟	藝琳建業	2012
18.	和合石骨灰龕園(12台)	食環署/建業署/安保工程	2012
19.	和合石火葬場(3台)	食環署/建業署/宏宗建業	2012
20.	北大嶼山醫院	醫院管理局	2013
21.	柴灣歌連臣角火葬場(2台)	食環署/建業署/冀圖機電	2013
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總數:
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處理量	每小時400公斤
設備尺寸	除煙設備空間約12m x 7m x 5m(H)
燃燒室尺寸	內部：1300(W) x 2500(D) x 2000mm(H) 爐口：1300(W) x 1600mm(H)
適合場所	殯儀館、墳場、骨灰龕等
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4.	沙田寶福山（骨灰龕）	2011
5.	澳門永念庭（骨灰龕）	2012
6.	香港殯儀館	建造中
7.	大圍寶福紀念館新系統	建造中
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D02/01 Rev 5.0 Sewage Impact Assessment Report

S12A Rezoning Application from "GB" to "G/IC" for a Religious Institution at Lot Nos. 1744A, 1744B, 1744C, 1744F, 1744G, 1744H and 1744I in DD 132, Tuen Mun

Prepared for Tin Kwong Lun Yee Ltd
1 February 2021

SMEC INTERNAL REF. 7076606

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2	9 October 2019	Austin CHAN	Cleo YIP	Antony WONG
3	13 January 2020	Austin CHAN	Cleo YIP	Antony WONG
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This report is confidential and is provided solely for the purposes of supporting S12A Rezoning Application from "GB" to "G/IC" for a Religious Institution at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H and 1744 I in D.D. 132, Tuen Mun. This report is provided pursuant to a Consultancy Agreement between SMEC Asia Limited ("SMEC") and Tin Kwong Lun Yee Ltd, under which SMEC undertook to perform specific and limited tasks for Tin Kwong Lun Yee Ltd. This report is strictly limited to the matters stated in it and subject to the various assumptions, qualifications and limitations in it and does not apply by implication to other matters. SMEC makes no representation that the scope, assumptions, qualifications and exclusions set out in this report will be suitable or sufficient for other purposes nor that the content of the report covers all matters which you may regard as material for your purposes.

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1 INTRODUCTION

1.1 Background

1.1.1 SMEC Asia Limited (SMEC) has been commissioned by the Tin Kwong Lun Yee (the Applicant) to conduct a Sewage Impact Assessment (SIA) to support the Planning Application under S12A of the Town Planning Ordinance (TPO), to rezone the subject site, which comprises Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D. 132, Tuen Mun (the Site or the Project) from "Green Belt" ("GB") to Government, Institution or Community" ("G/IC"). The "G/IC" zoning covers religious institution as a permitted use under column 1 in the relevant Approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35.

1.1.2 Tin Kwong Lun Yee (天罡隆義) is a branch of Vajrayana (密宗) from the Tibetan Buddhism (藏傳佛教) Religion of the Taiwan stream. Tin Kwong Lun Yee is dedicated to provide training and coaching to members who wish to realise the Buddha's teaching in their daily life and to benefit all sentient beings as well. As a low-profile and newly established religion in Hong Kong, Tin Kwong Lun Yee is committed to provide social services by volunteering and offers assistance as needed to organisations.

1.2 Site Description

1.2.1 The Site is located at the upper part of the Kwong Shan Tsuen and north-west of Po Tin Estate in Tuen Mun, as illustrated on ***Figure 1.1***. The Site occupies an area of 3,137m^2. The Site was vacant before 1960. Three existing 2-storey villas occupy the Site and the building licence for these buildings was issued on 1960. The site was used for residential purposes before 1960. As such, sewage/ wastewater was already generated from the Site until 1990s. In 2008, the Site was acquired by Tin Kwong Lun Yee and the abandoned villas were renovated for its existing use. The Site is accessible from an existing paved access road connected to Hing Fu Street.

1.2.2 As confirmed by the Applicant, no kitchen or no catering service is provided to the visitors or for site staff, so there will be no wastewater generated from this source.

1.2.3 As described above, the Site has been in operation for some fifty years without adverse sewage impact generated and there is no new use that will increase the risk of water pollution or sewage impact.

1.3 Project Description

1.3.1 ***Figure 1.1*** presents a Master Layout Plan of Tin Kwong Lun Yee temple (the Project). As illustrated, the Project comprises the following facilities:

- One columbarium blocks (Block 1)
- One building block for columbarium, toilet, management office and storage (Block 2)
- One building block for religious and columbarium use (Block 3)
- A car parking area
- Landscaped areas, pedestrian areas and access roads

1.3.2 No major building construction or demolition works will be required for the Project since the buildings and structures are already in place.

1.3.3 Totally 11,094 niches will be provided for the Project and 936 niches of which were sold on or before 30 June 2017 to satisfy the genuine need of columbarium supply in Hong Kong.

1.3.4 It is envisaged that the additional proposed columbarium facilities can be accommodated within the existing building structures, including the religious hall and management office.

1.3.5 The columbarium operates daily including weekends and general holidays, except Ching Ming and Chung Yeung Festival Day and the weekend of two weeks before/after the Festival day. The operating hours of Tin Kwong Lun Yee are from 10am to 5pm during non-festival periods and from 8am to 5pm during weekdays of festival periods. The operation details are summarised in ***Table 1-1***.

Table 1-1 Detailed Operation Period of Tin Kwong Lun Yee

Period	Operation Hours
Festival Period (Total 5 days) • Festival Day (Ching Ming / Chung Yuen Festival) • Saturday and Sunday two weeks before the Festival day • Saturday and Sunday two weeks after the Festival Day	The Columbarium will be closed.
Festival Period – Weekday (Monday – Friday excluding general holidays)	8am – 5pm
Non-Festival Period (Monday – Sunday)	10am – 5pm

1.3.6 A site visit was carried out on 22 June 2018. Approximately 5 to 10 minutes on foot are required to reach the Site from Hing Fu Street. As advised by the Applicant, it is unlikely that a large number of visitors will come to the Site during non-festival periods, while advance booking is required during weekdays within festival periods to control visitor the numbers.

1.3.7 As advised by the Applicant, advance reservation for the shuttle bus services will be required. No other vehicles except emergency vehicles and no other visitors apart from those who will have made the reservation in advance will be allowed to enter the Site during weekdays within festival periods.

1.3.8 During non-festival periods, not more than 48 visitors per day are expected to visit the site. Therefore, no advance reservation and shuttle bus service, as well as traffic control will be necessary.

1.3.9 There may be religious activity activities carried out by worshippers during non-festival periods.

1.4 Objectives of this Report

1.4.1 This Sewage Impact Assessment (SIA) has been undertaken to access any potential sewage impacts arising from the Project.

1.4.2 Mitigation measures have been recommended, where appropriate, to alleviate any identified sewage impacts or constraints during the operation of the Project.

1.5 Reference Materials

1.5.1 The following sources of information have been specifically referred to:

- Environmental Protection Department (EPD) publication Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0, March 2005
- Hong Kong BEAM Society, BEAM Plus Version 1.2 for New Buildings, November 2012
- EPD publication Guidance Notes On Discharges From Village Houses
- EPD publication ProPECC PN5/93, Drainage Plans, September 1993
- Drainage Services Department (DSD) publication Sewerage Manual – Key Planning Issues and Gravity Collection System

Figure 1.1 Site Location and its Environs

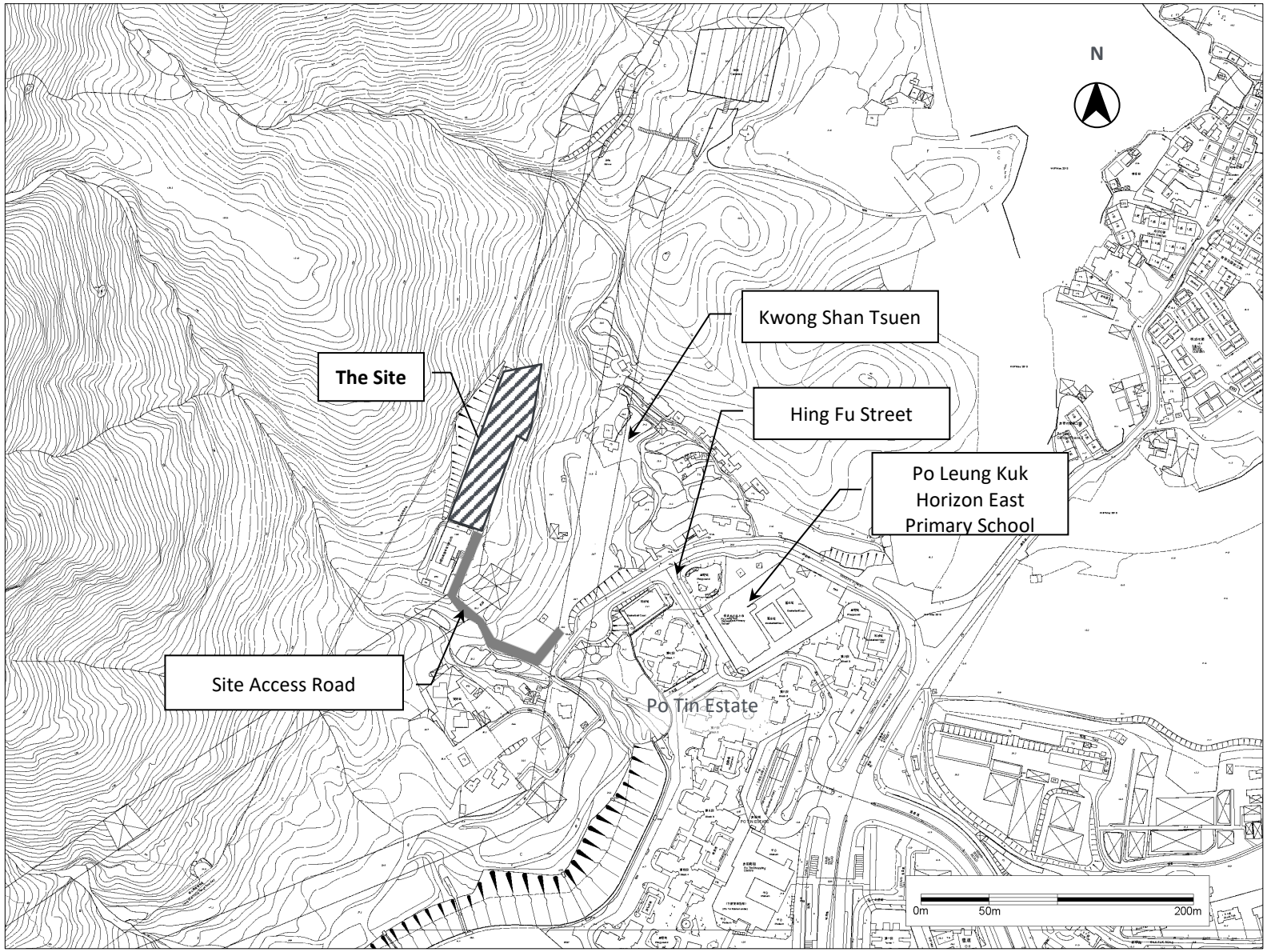
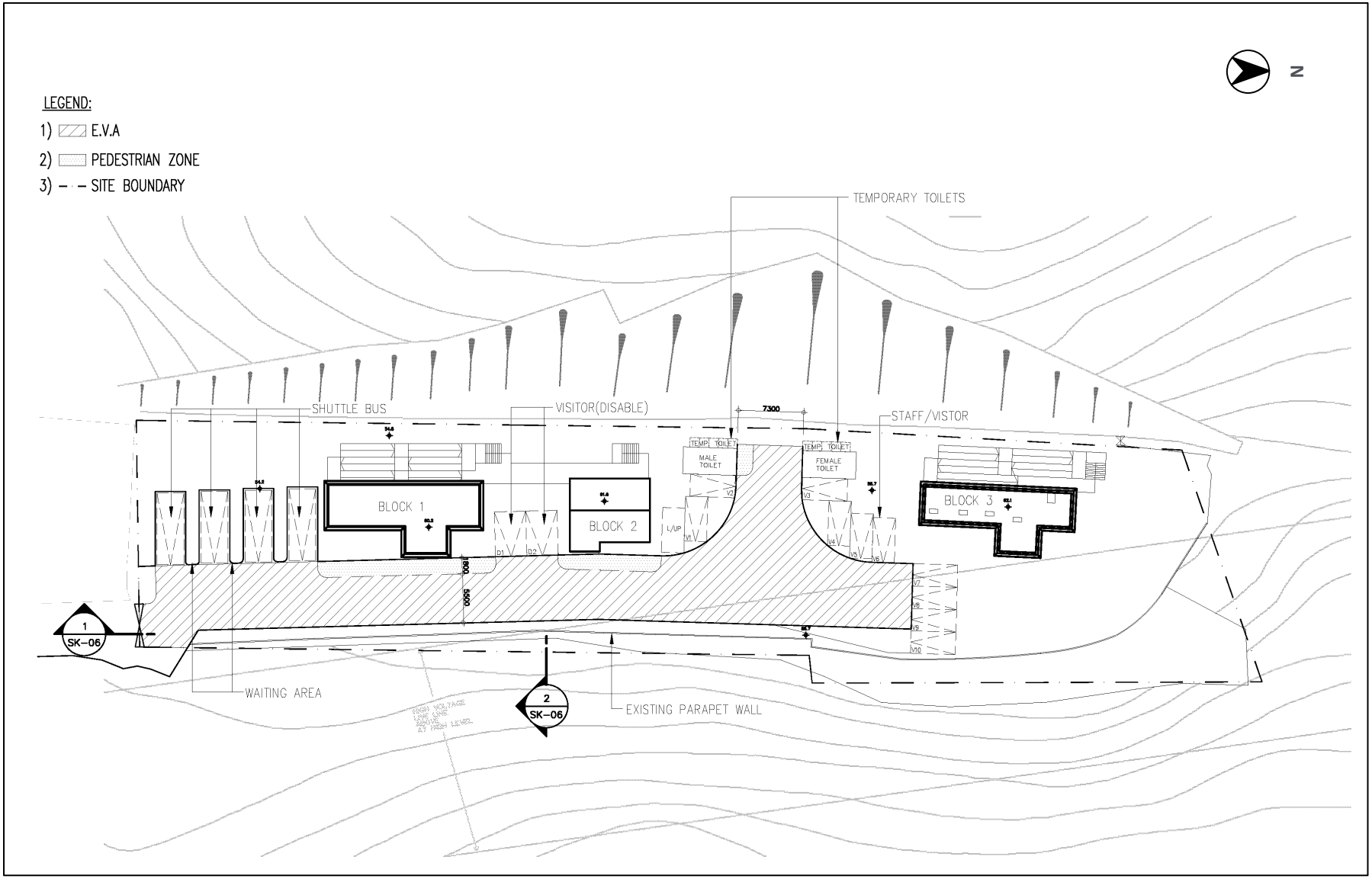


Figure 1.2 Master Layout Plan of the Project



2 DESCRIPTION OF EXISTING ENVIRONMENT AND BASELINE CONDITIONS

2.1 Site Location

2.1.1 The Site is located at Lot Nos. 1744 A, 1744 B, 1744 C, 1744 F, 1744 G, 1744 H, 1744 I in D.D.132, Tuen Mun. The Site is currently zoned "Green Belt" ("GB") under the Approved Tuen Mun Outline Zoning Plan (OZP) No. S/TM/35. It is surrounded by slopes, mature trees, burial ground, temples and columbarium.

2.2 Existing Baseline Conditions

2.2.1 The drainage plans in the vicinity of the Site were reviewed at the Drainage Services Department (DSD) offices on 7 February 2012 to gather background information on existing sewerage infrastructure in the area. Upon review of the relevant sewerage drainage plan (5-NE-25D-3), it was confirmed that there is no existing public sewerage system in the vicinity of the Site. As further verified from the latest information of Lands Department (LandsD) GeoInfo Map on 22 October 2018, there is no update of the public sewerage system within the site and in its surrounding.

2.2.2 Site visits were carried out on 22 June and 21 September 2018 to further review the existing public sewerage system. Provision of public sewerage connection was not observed in the vicinity of the Site. The nearest existing public sewerage connection is located near the Hing Kwai Street, opposite to the Po Tin Estate Bus Terminus, which is around 600m from the Project Site.

2.2.3 There is no public sewerage connection in the vicinity of the site at present, and there are no immediate plans by the government to extend the sewerage system to the Site in the near future. All the wastewater generated from the Site will be tankered away regularly.

2.2.4 Portable toilets with aboveground storage tanks / tailor-made aboveground storage tank are recommended to collect and tanker away the wastewater.

2.3 Potential Sewage Impact

2.3.1 There is no public sewerage system nearby. To prevent sewage impacts, sewage collected at the portable toilets during festival periods will be taken off-site for treatment.

3 SEWAGE ANALYSIS

3.1 Assumptions and Methodology

3.1.1 Two scenarios are assessed: "Festival Period Scenario" represents a situation when all urns are fully utilised and attracting the maximum number of visitors during festival periods (i.e. weekdays during Festival Period) as defined in ***Table 1-1***; and the "Non-Festival Scenario" represents situation when all urns are fully utilised and attracting the maximum number of visitors during non-festival periods.

3.1.2 The estimated numbers of visitors and staff during festival periods between 8am and 5pm and during non-festival periods between 10am and 5pm due to the Proposed Development (i.e. provision of 11,094 niches) are shown in ***Table 3-1***.

Table 3-1 Estimated Populations During Festival Periods and Non-festival Periods

PERIOD	NO. OF VISITORS	NO. OF STAFF [NOTE 1]
Festival	~5,580[Note 2]	~47[Note 3]
Non-festival	~48	~8

Notes:

1. Full time on site.
2. The number of visitors is advised by the Traffic Consultant. According to the latest TIA report, the maximum number of visitors is estimated to be 620 visitors/hours during Festival Period. Since the operation hours of this period is 9 hours, the maximum number of visitors visit the Site will about 620 visitors/hour x 9 hours = 5,580 visitors/day.
3. With reference to the latest TIA report, the maximum number of staff to be deployed during festival period will be 54 with 15 management staff and 39 security guards.

3.1.3 There is no public sewerage connection in the vicinity of the Site at present, and there are no immediate plans by government to extend the sewerage system to the Site in the near future. All wastewater generated from the Site by the visitors and part of the staff (i.e. 39 security guards) will be tankered away during Festival Periods, and that from the other staff (i.e. 15 management staff) will be discharged into the existing septic tank/soakaway system. On the other hand, those generated from the Site by both staff and visitors during Non-festival Periods will be discharged into the existing septic tank/soakaway system. The approximate locations of two existing septic tank/soakaway systems are indicated in ***Figure 3.1***.

3.1.4 Wastewater generated from the Site will be sewage generated from the portable toilets, greywater from sinks for hand washing, and the potential wastewater generated from the smokeless joss paper furnace if it will be provided in future.

Assumptions for Sewage Generation from Visitors During Festival Periods

1. Up to 50% of visitors will use the toilet on-site.
2. With reference to page 3,081 of the sixth edition of *Magill's Medical Guide*, published by Salem Press in 2011, human micturition average~200mℓ[Ref.#1].
3. The Applicant has committed to installing a water saving flush of ~1.2 ℓ /flush in container toilets (see ***Appendix A***). Alternatively, chemical toilets (see ***Appendix B***) with flush volume lower than 1.2 ℓ /flush will be used instead. It is assumed a water saving flush of 1.2 ℓ /flush container toilets will be used for the worst-case scenario.

1 Magill's Medical Guide, 6th ed., various medical editors, Salem Press, USA, 2011.

4. For hand washing, the wastewater was estimated based on the *BEAM Plus New Building (Version 1.1)* published by BEAM Society as shown below[Ref.#2]:
   (a) Tap flow rate = 8.3ℓ/min
   (b) Duration of hand washing = 10s
5. The unit rate of total sewage generation from a visitor is:
   (a) Unit flow of toilet flushing = 1.2ℓ + 200mℓ = 1.4ℓ
   (b) Unit flow of hand washing = 8.3ℓ/min / 60s x 10s = 1.4ℓ/wash
   (c) Unit flow of total sewage = 2.8ℓ/person

Assumptions for Sewage Generation from Visitors during Non-Festival Periods

1. Up to 100% of visitors will use the toilet on-site.
2. With reference to page 3,081 of the sixth edition *of Magill's Medical Guide*, published by Salem Press in 2011, human micturition average~200mℓ[Ref.#1].
3. The flushing volume of water saving flushing water closets is around 7.5ℓ estimated based on the *BEAM Plus New Building (Version 1.2)* published by BEAM Society as shown below[Ref.#2].
4. For hand washing, the wastewater was estimated based on the *BEAM Plus New Building (Version 1.1)* published by BEAM Society as shown below[Ref.#2]:
   (a) Tap flow rate = 8.3ℓ/min
   (b) Duration of hand washing = 10s
   (c) The unit rate of total sewage generation from a visitor is:
   (d) Unit flow of toilet flushing = 7.5ℓ + 200mℓ = 7.7ℓ
   (e) Unit flow of hand washing = 8.3ℓ/min / 60s x 10s = 1.4ℓ/wash
   (f) Unit flow of total sewerage = 9.1ℓ/person

Sewage Generation from Site Staff

3.1.5 Totally 54 staff will be deployed during festival period, among which 15 staff will be management staff and 39 will be security guards. It is assumed that the 15 management staff will use the existing toilets on-site and the sewage generated will be discharged into the existing septic tanks/soak-away pit system. Meanwhile, 39 security guards will use the proposed container/chemical toilets as mentioned in ***paragraph 3.2.3*** below. The unit flow factor is assumed to be 0.08m^3/person/day, which is the global unit flow factor for industrial employee as recommended in the *Guidelines for Estimating Sewerage Flows for Sewerage Infrastructure Planning Version 1.0* published by EPD in 2005.

Wastewater Generation from Smokeless Joss Paper Furnace (if provided)

3.1.6 As mentioned in the Environmental Assessment (EA) Report, on-site joss paper burning is currently not allowed. If the Applicant considers allowing this in future, smokeless joss paper furnaces with dust control measures shall be installed and the recommendations in EPD's *Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places* shall be followed. Wastewater may be arising from the smokeless joss paper furnaces.

3.1.7 The number of smokeless joss paper furnaces is not known at this stage since there is no plan to allow joss paper burning. Nevertheless, the following assumptions are made for estimating the wastewater amount:

2 The default assumptions suggested in the BEAM Plus for New Buildings estimate the water consumption for cisterns for non-residential use.

1. One smokeless joss paper furnace as shown in Appendix A of the EA Report supporting this planning application will be provided on-site.
2. Approximately 400 ℓ/day of wastewater will be arising from a smokeless joss paper furnace as advised by the supplier, Hong Kong Productively Council (HKPC).

3.2 Results and Discussion

3.2.1 As presented in ***Appendix C*** and ***Appendix D***, the peak discharge flows during festival periods and non-festival periods are summarised in ***Table 3-2***.

Table 3-2 Wastewater Generated During Festival Periods and Non-festival Periods

SOURCE	WASTEWATER GENERATION, m^3/DAY	
	FESTIVAL PERIOD	NON-FESTIVAL PERIOD
(1) Sewage		
(a) Visitors	7.81	0.44
(b) Site Staff (Security Guards)	3.12	0.64
(c) Site Staff (Management Staff)	1.2	
TOTAL	**12.13**	**1.08**
(2) Wastewater from Smokeless Joss Paper Furnace, if provided	**0.4**	**0.4**

3.2.2 The estimated volume of sewage generated from the Site during festival periods and non-festival periods will be 12.13m^3/day and 1.08m^3/day, respectively. Because the maximum amount of sewage will be less than 2m^3/day during non-festival period, the sewage can be treated by on-site septic tank/soakaway pit system which the sludge will be collected by a licensed collector when needed. During festival periods, the sewage generated during peak period will be collected by a licensed collector.

3.2.3 To cater the sewage arising from the Potential Scheme with up to 11,094 niches, the following two options are recommended:

(a) **Option 1 – Non-Festival Period** The sewage will be less than 2m^3/day and so the sewage can be treated by the on-site septic tank/soakaway pit system.

(b) **Option 2 – Festival Period**

(i) For the site staff's sewage of 1.2m^3/day, it will be treated by the on-site septic tank/soakaway pit system.

(ii) For the visitors' and staff's sewage of 10.93m^3/day, it should be collected by portable toilets and the collected sewage shall be tankered away by a licensed collector. Portable toilets can be the toilets shown in ***Appendix A*** and ***Appendix B*** described as follows:

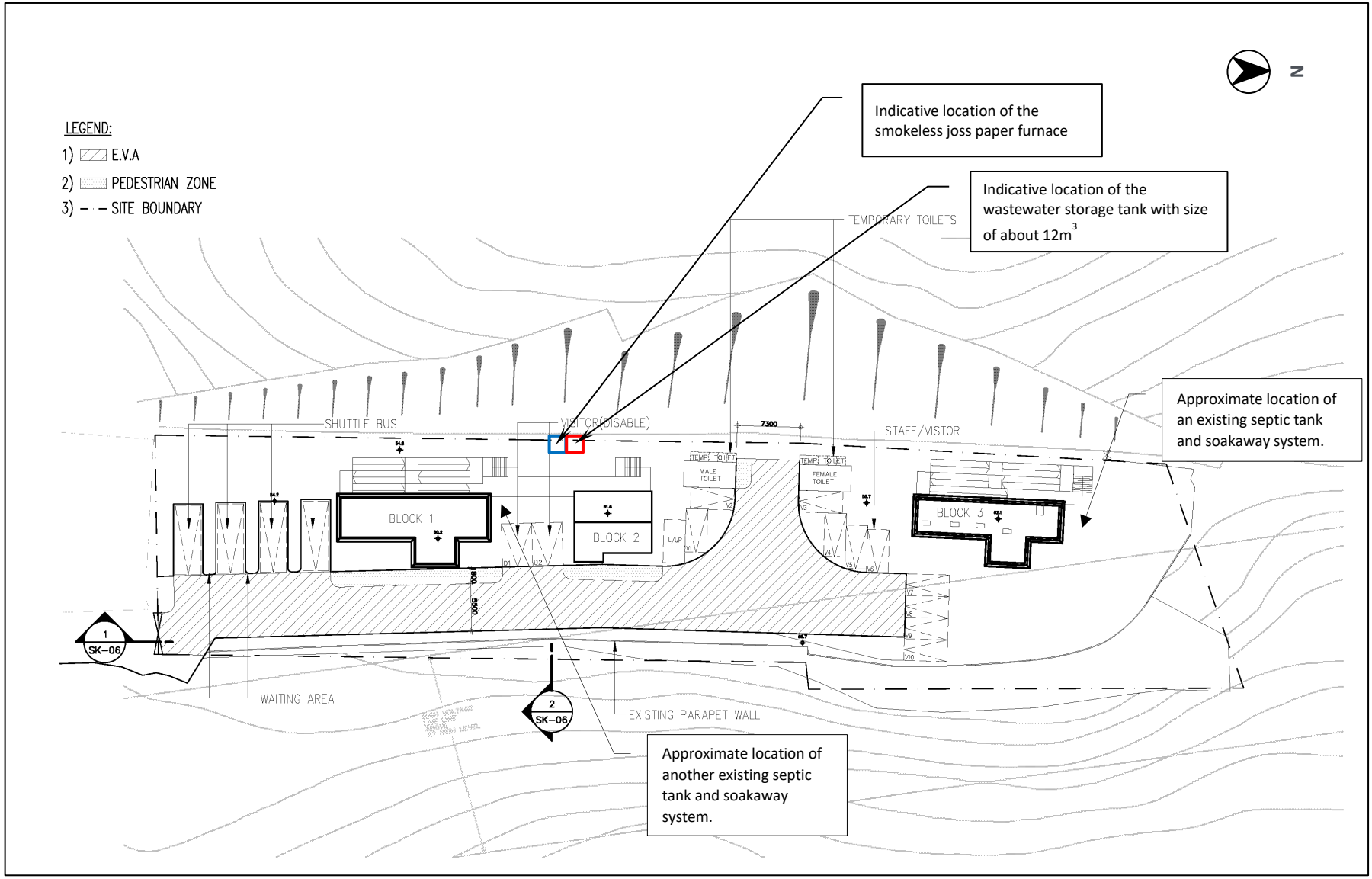
- three container toilets installed with vacuum toilets (~1.2 ℓ of water per flush). The container toilet should be connected to a sewage holding tank with a size of at least 4m^3; or
- at least 28 chemical toilets.

3.2.4 Sludge in septic tank/soakaway pit system shall be collected by a licensed collector. Similarly, sewage from chemical toilets or from storage tanks should be tankered away off site by a licensed collector.

3.2.5 Regarding the wastewater arising from a smokeless joss paper furnace if provided in future, for a better arrangement the wastewater arising from the furnace will be temporarily stored in a wastewater storage tank with a total capacity of 12m^3 or three numbers of wastewater storage

tanks with a capacity of 4m^3 for each. The stored wastewater will be tankered away by a licensed collector when necessary. The indicative location of the smokeless joss paper furnace and the wastewater storage tank can be referred to ***Figure 3.1***.

Figure 3.1 Indicative Location of the Smokeless Joss Paper Furnace and the Wastewater Storage Tank (if provided in future)



4 CONCLUSIONS AND RECOMMENDATIONS

4.1.1 Potential sewage impacts that may be potentially arising from the operation of the Tin Kwong Lun Yee religious institution have been assessed and appropriate mitigation measures are recommended to support the current rezoning application.

4.1.2 There is no public sewerage connection in the vicinity of the site at present, and there are no immediate plans by government to extend the sewerage system to the Site in the near future.

4.1.3 During the festival period for provisions of 11,094 niches, the total wastewater generated from the Site has been estimated at ~12.13m^3/day, among which 1.2m^3/day will be generated from the management staff. On the other hand, the estimated total wastewater generated from the Site during the non-festival period is about 1.08 m^3/day. As the maximum sewage generation rates are less than 2m^3/day for the management staff during festival period, and also for all staff during non-festival period, the sewage is suggested to be treated by the existing on-site septic tank/soakaway pit system which the sludge will be collected by a licensed collector when needed.

4.1.4 For potential scheme with provisions of up to 11,094 niches during festival period, the total wastewater generated from the Site has been estimated at ~12.13m^3/day. Among the ~12.13m^3/day sewage generated, it is recommended that sewage generated by the management staff of about 1.2m^3/day will be treated by the on-site septic tank/soakaway pit system, while that 10.93m^3/day generated by visitors and other staff (i.e. security guards) will be collected by portable toilets and then tankered away by a licensed collector. The recommended types of portable toilets to be adopted are either a container toilet installed with vacuum toilets with wastewater storage capacity of at least 12m^3 or three number of wastewater storage tanks with size of 4m^3 , or at least 28 chemical toilets.

4.1.5 On-site joss paper burning is currently not allowed. If the Applicant considers allowing this in future, smokeless joss paper furnaces with dust control measures shall be installed and the recommendations in EPD's *Guidelines on Air Pollution Control for Joss Paper Burning at Chinese Temples, Crematoria and Similar Places* shall be followed. Wastewater may be arising from the smokeless joss paper furnaces. As assumed in ***paragraph 3.1.7***, a smokeless joss paper furnace, if provided in future, will generate wastewater of approximately 400 ℓ/day. A wastewater storage tank with a size of about 8m^3 is recommended for a better wastewater arrangement as mentioned in ***paragraph 3.2.5*** to be tankered away when necessary.

4.1.6 In conclusion, the sewage impacts imposed by the Project are considered to be acceptable.

Appendix A CATALOGUES OF CONTAINER TOILET INSTALLED WITH VACUUM TOILETS

Jets™ 50M FD/VPC-V

Toilet



Jets™ 50M is a floor model vacuum toilet in a modern design.
The toilet is equipped with the Jets™ FD-Valve- VPC-V controller, vacuum operated, featuring low water consumption, reliable flushing and discharge.

Technical Data:

Outside Dimensions:	385x590x465 (WxLxH)
Bowl Material:	Vitreous china
Bowl Weight net:	19,5 kg
Total Weight:	24 kg
Water Connection:	BSP 1/2" male ball valve
Discharge Outlet:	Outside diameter Ø 50mm
Part No.:	063600200

Deviation for main dimentions china products: +/-2%

Note: Changes without prior notice

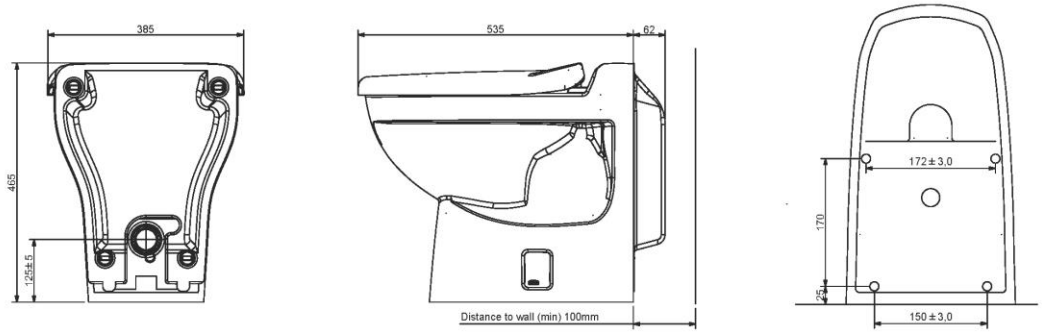
www.jets.no
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JETS™

Jets™ 50M FD/VPC-V

Toilet

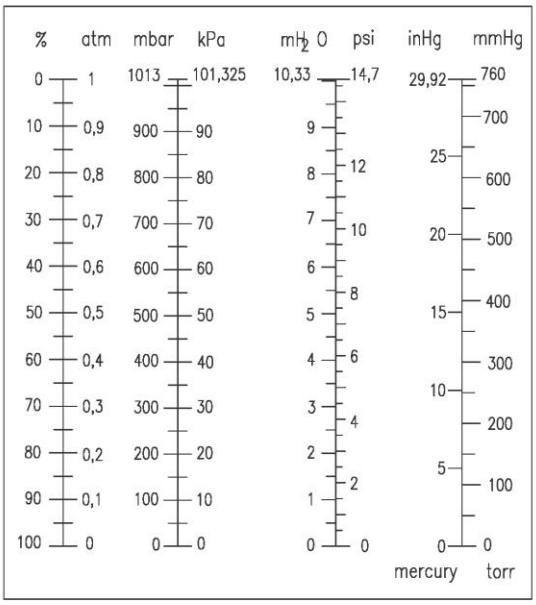
Dimensions JETS 50M



Operating Data

Flushing Time: .....Adjustable (5 seconds)
Discharge Time:.....Adjustable (2 seconds)
Water Pressure:.....2-7 bar (200-700 kPa)
Operating Vacuum: 30-55%
Water Consumption: ..... Adjustable (1,2 litres)
Air Consumption: ..... Adjustable (Appr. 60 litres at 50% vacuum)

Vacuum Translation Table



www.jets.no
Myravegen 1, N-6060 Hareid Norway Tel. + 47 70 03 91 00. Fax + 47 70 03 91 01. E-mail: post@jets.no

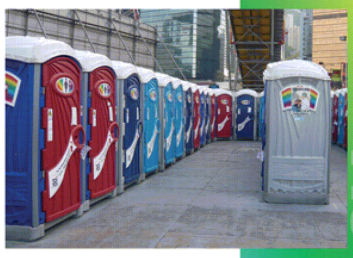
JETS™

Appendix B **CATALOGUES OF CHEMICAL TOILETS**


彩虹型流動廁所
Enjoy Your Time
Rainbow Fresh Toilet
舒適~環保~
衛生的最佳選擇
Toi Toi Hong Kong Limited
Tel: 852 2477 1911 Fax: 852 2443 4790
Email: tthk@toitoi.com.hk Website: www.toitoi.com.hk
Toi Toi Guangdong Limited
通利流動廁所租賃服務部
Tel:86 150-1253-5110 Fax: 852 2443 4790
Email: sales@toitoi.com.cn Website: www.toitoi.com.hk

彩虹型流動廁所





環保性： 產品爲高密度聚乙稀製成，具有可回收性，
表面採平滑設計易清潔，不積存臭味和細菌
實用性：不怕風吹日曬雨淋，堅固耐用外觀優美大方，
適合公眾場所使用
衛生性：特殊空氣對流設計，通風性良好，
特殊除臭消毒劑，清香無異味
靈活性：不受地形場所限制，無須水，電及排水設備
美觀性：色彩多樣，單選，複選多重搭配

TOI TOI 已正式成爲認可的專業
環保處理公司，並且獲得ISO 9001認可證書，此外，
能夠嚴格地執行內部品質稽核，尤其在環保普世
價值概念中，是用戶最佳選擇

TOI TOI 所提供的專業服務：

＊提供高壓專業清洗機清潔廁所內外（客戶可以要求安排
定期服務或每日服務）
＊依據香港政府法規，將污水排放於合法的污水處理廠內
＊提供定期補充藥水服務
＊供應適量的衛生紙
＊使用結束後，提供完善清潔服務
＊２４小時緊急維修服務

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Email: tthk@toitoi.com.hk Website: www.toitoi.com.hk
Toi Toi Guangdong Limited
通利流動廁所租賃服務部
Tel:86 150-1253-5110 Fax: 852 2443 4790
Email: sales@toitoi.com.cn Website: www.toitoi.com.hk

Rainbow Fresh Toilet

產品規格：

尺寸規格：１０６０mm長ｘ
１０６０mm寬ｘ
２４００mm高
重　　量：７０ｋｇ
容　　量：４００公升或以上
設　　備：

1. 腳踏式藥水沖洗系統
2. 小便斗
3. 衛生紙架
4. 洗手檯
5. 鏡子
6. 衣物掛勾
7. 男女廁所標誌
8. 室內通風管
9. 透氣窗

VIP East 東方式貴賓廁

東方式貴賓蹲廁是眾多類型中設備最完善及設計最新穎的款色，其中渦流式沖水的設計更增加了其衛生程度，另外更有多種廁內配套可供選擇。

This is our top of the range model. It provides the maximum hygiene standard due to the special flushing system and the additional toiletries provided.



高度 Height	: 2.29 M (7 ft.)
寬度 Width	: 1.12 M (4 ft.)
縱深 Length	: 1.22 M (4 ft.)
重量 Weight	: 112.5 kg. (empty)
牆身厚度 Wall Thickness	: 3.05mm
款式 Type	: 蹲廁 Squatting
污水缸容量 Holding Tank	: 400 L
清水缸容量 Flushing Water Tank	: 100L 高速渦流式沖水系統, 密封式廁缸 100 L high velocity flushing system with concealed toilet bowl



ISS Environmental Services (HK) Ltd.

Appendix C CALCULATION OF SEWAGE GENERATION DURING PEAK PERIOD (FOR FULL CAPACITY SITUATION OF 11,094 NICHES)

1. Sewage Generation for Operation during Peak Period (i.e. Weekdays during Festival Period excluding the Ching Ming and Chung Yeung Festival Days and the weekends two weeks before/after the Festival Days)					
(1). Sewage generated by Management Staff					
Operation Hours	a	=	9	hours	Applicant advised that the operation hours will be 8am to 5pm during festival seasons.
1A. Sewage discharged to existing septic tank and soack away pit system					
No. of Staff (will use existing on-site toilets)	b	=	15	staff	As advised by the Applicant, the management staff (i.e. 15 no.) will use the existing toilets and the sewage generated will be discharged into the existing septic tank and soak away pit system.
Unit Flow rate (for Staff)	c		0.08	m^3/person/day	The UFF of "Commercial Employee" in Table T-2 of reference 1 is adopted. [Note 1]
Total Flow Rate generated by Staff [Note 6]		=	1.2	m^3/day	b x c
1B. Sewage to be handled by container/chemical toilets					
(i) Sewage generated by the Other Staff (i.e. Security Guards)					
No. of Staff (will use container/chemical toilets)	b	=	39	staff	As advised by the Applicant, the staff of security guards (i.e. 39) will use the container toilets/portable toilets on-site.
Unit Flow rate (for Staff)	c		0.08	m^3/person/day	The UFF of "Commercial Employee" in Table T-2 of reference 1 is adopted. [Note 1]
Total Sewage Generation by The Management Staff [Note 6]		=	3.12	m^3/day	b x c
(ii). Sewage generated by visitors and other staff (i.e. Security Guards)					
Maximum Total Visitors	d	=	5,580	visitors/day	Visitors number per day is advised by the traffic consultant, maximum 620 visitors/hour during peak hour x 9 hours
Unit Flow rate (for visitors)	e	=	0.0028	m^3/person/visit	200ml micturtion[Note 2]+1.2L flushing[Note 3]+1.4L Handwashing[Note 4]
Percentage of visitors going to toilet	f	=	50	%	Based on the Applicant's current experience, not all the visitors will use toilets once for each visit. Based on their observation, only 50%.[Note 5]
Total Sewage Generation by Staff and Visitors	g	=	10.93	m^3/day	b x c + d x e x f
Option 1. Container toilet installed with vacuum toilets					
Storage Capacity of Portable (Container Toilet)	h	=	4,000	L	Flush volume is 1.2L. One Container (4,000 L each) will be installed as advised by the supplier.
No of Container Toilet	i	=	3	tanks	(g/h) x 1,000 L/m^3
Option 2. Chemical toilets					
Storage Capacity of a Chemical Toilet		=	400	L / toilet	With reference to the Supplier's Catalogue enclosed in Appendix B of the SIA Report
No. of Chemical Toilets Required		=	28	toilets	
2. Wastewater generated by Smokeless Joss Paper Furnace (Indicative Calculation) [Note 7]					
Wastewater from Smokeless Joss Paper Furnace		=	0.4	m^3/furnace/day	As advised by the supplier of the Smokeless Joss Paper Furnace.
Number of Smokeless Joss Paper Furnace		=	1	furnace	
Estimated total peak daily flow [Note 8]		=	0.40	m^3/day	

Note

1 Environmental Protection Department (EPD) publication Guidelines for Estimating Sewage Flows (GESF) for Sewage Infrastructure Planning Version 1.0, March 2005
2 Human's micturition is assumed to be 200mL in accordance with p. 3081 of "Magill's Medical Guide", 6th ed., various medical editors, Salem Press, USA, 2011.
3 The volume of flushing system is advised by the supplier of container toilet as shown in Appendix A.
4 BEAM Plus New Buildings Version 1.2 (8.3L/mins x 10s).
5 It is assumed that 50% of visitors will visit the toilets advised by the Applicant based on the current experience.
6 The total sewage generated by the management staff will be less than 2m^3/day and so the sewage can be treated by the on-site septic tank/soakaway pit system.
7 The details of assumptions adopted for wastewater generated by smokeless joss paper furnace could be referred to Sections 3.16 - 3.17 of the SIA Report.
8 Wastewater generated from the operation of the smokeless Joss Paper Furnace will be stored in an approximated 8m^3 size wastewater storage tank. The wastewater collected in the tank will be collected and tankered away by licenced contractor when necessary.

Appendix D CALCULATION OF SEWAGE GENERATION DURING NON-PEAK PERIOD (FOR FULL CAPACITY SITUATION OF 11,094 NICHES)

1. Sewage Generation for Operation during Non-peak Period					
Operation Hours	a	=	7	hours	Applicant advised that the operation hours will be 10am to 5pm during non-festival seasons.
No. of Staff	b	=	8	staff	As advised by the Applicant
Unit Flow rate (for Staff)	c	=	0.08	m^3/person/day	The UFF of "Commercial Employee" in Table T-2 of reference 1 is adopted. [Note 1]
Maximum Total Visitors	e	=	48	visitors/day	
Unit Flow rate (for visitors)	f	=	0.0091	m^3/person/visit	200ml micturtion[Note 2]+7.5L flushing[Note 3]+1.4L Hand-washing[Note 4]
Percentage of visitors going to toilet	g	=	100	%	Based on the Applicant's current experience, many the visitors will use toilets once for each visit. For the worst-case scenario, 100% of visitors using toilets is assumed. [Note 5]
Total ADWF for Volunteer and Visitor (ADWFW) [Note 6]		=	1.08	m^3/day	b x c + e x f x g
3. Wastewater generated by Smokeless Joss Paper Furnace (Indicative Calculation) [Note 7]					
Wastewater from Smokeless Joss Paper Furnace		=	0.4	m^3/furnace/day	As advised by the supplier of the Smokeless Joss Paper Furnace.
Number of Smokeless Joss Paper Furnace		=	1	furnace	
Estimated total peak daily flow [Note 8]		=	0.40	m^3/day	

Note

1 Environmental Protection Department (EPD) publication Guidelines for Estimating Sewage Flows (GESF) for Sewage Infrastructure Planning Version 1.0, March 2005
2 Human's micturition is assumed to be 200mL in accordance with p. 3081 of "Magill's Medical Guide", 6th ed., various medical editors, Salem Press, USA, 2011.
3 The estimated toilet flush of 7.5 l/flush made reference to BEAM Plus NB (Version 1.2), published by BEAM Society.
4 BEAM Plus New Buildings Version 1.2 (8.3L/mins x 10s).
5 It is assumed that 100% of visitors will visit the toilets advised by the Applicant based on the current experience.
6 The total sewage generated will be less than $2m^3$/day and so the sewage can be treated by the on-site septic tank/soakaway pit system.
7 The details of assumptions adopted for wastewater generated by smokeless joss paper furnace could be referred to Sections 3.16 - 3.17 of the SIA Report.
8 Wastewater generated from the operation of the smokeless Joss Paper Furnace will be stored in an approximated $8m^3$ size wastewater storage tank. The wastewater collected in the tank will be collected and tankered away by licenced contractor when necessary.

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PROPOSED RELIGIOUS INSTITUTION AND COLUMBARIUM

IN

TIN KWONG LUN YEE,

LOTS 1744 S.A, 1744 S.B, 1744 S.C, 1744 S.F, 1744 S.G, 1744 S.H

AND 1744 S.I. IN D.D.132,

HING FU STREET,

TUEN MUN, NEW TERRITORIES

GEOTECHNICAL PLANNING REVIEW REPORT

MARCH 2021

Prepared by

Henry Chan
Registered Geotechnical Engineer
RGE 12/05

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Executive Summary

This GPRR presented the original contents of January 2021 Report on Tin Kwong Lun Yee itself, which have already incorporated comments offered by GEO of CEDD on its last submission.

In March 2021, Planning Division visited the Site and required a GPRR to cover the access road running from the roundabout of Hing Fu Street to the Site. Additional contents are therefore added to Section 3 para 3.2 and Appendix A, B and C to cover the affected area.

This March 2021 version of GPRR presented additional information and discussion to the existing access road, and its proposed widening works. It was concluded that very minimal earthworks will be required to improve the existing local access road by adding a 1.5m wide footpath and 3 passing-bays for light bus. One registered geotechnical features will be affected based on proposed road improvement works i.e. the western tip of 5NE-D/F31.

1. INTRODUCTION

The Site is at Lots 1744 S.A, 1744S.B, 1744 S.C, 1744 S.F, 1744 S.G, 1744 S.H. and 1744 S.I. in D.D.132, Hing Fu Street, Tuen Mun, New Territories. As it is proposed to be used as religious institution and columbarium, to rezone the application site from "Green Belt" to "Government Institution or Community, application to Town Planning Board is thus necessary. Under Town Planning Ordinance (CAP. 131), the applicant should submit a Geotechnical Planning Review Report (GPRR) with the planning application.

This geotechnical report is prepared to address the geotechnical contents of the Site based on the proposed development.

2. SITE DESCRIPTION

2.1 GENERAL

Subject Site currently is occupied by 3 blocks of 2-storey building height and two numbers of 1-storey temporary shelter. The site is generally rectangular on plan and about 62m long x 13m width, area is approximately 800m^2. The site is gentle slope from East to North and ground level from +54.2 to +56mPD.

The Site itself was formed by cutting into natural hillside which is traversed by access road leading to Columbarium. The cut features are registered feature 5NE-D/C2 and 5NE-D/F1 on the West and East respectively. Uphill slope runs from approximately + 120mPD to over +54mPD.

A Site location plan showing relevant features and the 1:1000 topographical survey plan is attached in **Appendix A**.

2.2 SUBJECT SITE GEOLOGY

To reveal the geological information for the Site, the following information was reviewed and attached:

- 1:20,0000 – scale geological map;
- Geotechnical Area Studies Programme (GASP);
- Enhanced Natural Terrain Landslide Inventory (ENTLI);
- Existing Borehole Records

2.2.1 Geological Map

Based on the 1:20,000 scale Hong Kong Geological Survey Map for Tsing Shan (Castle Peak) (Sheet No.: 5 HKGS – 1988 Edition), the Site is inferred to be underlain by Colluvium and Completely Decomposed TUFFITE. Solid geology comprises andesite with tuff and tuffite of Tuen Mun Formation (JTU).

Refer to extraction of the Geological Map Sheet 5 in Tsing Shan (Castle Peak) in **Appendix D**.

2.2.2 Geotechnical Area Studies Programme (GASP)

According to Geotechnical Area Studies Programme (GASP), Geotechnical Land Use Map (GLUM) EG/20/GAS 15/1, the site is classified as Class IV with Extreme Geotechnical limitations. Geotechnical Limitation Map (GLEAM) EG/20/GAS/15/15 indicated the site lies with zones of geotechnical potential for development. The Physical Constraint Map (PCM) indicates the Site could be underlain zones of colluvium which are subjected to overland flow and periodic inundation, evidence of unusual groundwater regime, Map No. EG/20/GAS 15/6. Engineering Geology Map (EGM) indicates the colluviums underlain the subject site can occur as independent deposits of a unique age such that one deposit overlies another. The older deposit may be subject to severe weathering and may be completely decomposed to a mottled, coloured sand silt on clayey silt similar to the residual deposits of their parent materials. Depth of such weathering could reach 10m thick or more.

Extracts of GLUM, GLEAM, PCM and EGM are shown in **Appendix D** respectively.

2.2.3 Natural Terrain Hazards

According to the Enhanced Natural Terrain Landslide Inventory (ENTLI) Map Sheet 05NED, no relevant natural landslide identified on the uphill side of the Site.

The nearest ENTLI is No. 0535 were recorded on the natural terrain.
ENTLI plan and record are enclosed in **Appendix E**.

Extent of Natural Terrain Hazard study (NTHS) Area is attached in Appendix C for agreement. Detailed NTHS will be carried out to this Area, and mitigation measures to natural slope hazard will be provided if found necessary.

2.2.4 Previous Ground Investigation Records

Ground Investigation works were carried out in July / August 2008 for Feature 5NE-D/C2 which recorded in the Stage 2 Study Report. The Stage 2 study (S2R 49/2006), in which relevant ground investigation results could be referred to. The existing GI results pretty much concur with the GASP reports, 1m thick Colluvium layer and the completely decomposed tuffite layer (CDT) is approximately 4m to10m thick. More solid geology is expected to occur at 7-15m below existing ground, i.e. at approximately +50.00mPD at crest of Feature 5NE-D/C2.

Findings based on retrieved Geotechnical Reports are presented in subsequent section.

2.2.5 Groundwater

From the Stage 2 Study Report of Feature 5NE-D/C2, groundwater monitoring was carried out in December 2008 to April 2009. The groundwater condition was dry and the groundwater table exists below the toe of slope.

2.2.6 Geotechnical Studies Reports

Stage 2 (S2R 49/2006) and Stage 3 (S3R 159/2009) Study Report for Feature 5NE-D/C2 were carried out by Scott Wilson Limited in July 2004 and JCL in September 2009 respectively. It is indicated that the slope was formed between 1963 and 1964 from the API record, likely in association with construction of houses at the slope toe. Upgrading works for Feature 5NE-D/C2(1) were carried out in November 2009 in LPM project, Contract No. GE/2008/07.

There were no geotechnical study report for Feature 5NE-D/F1 and 5NE-D/R8.

Some relevant GI information were retrieved in the Stage 2 Report and attached in **Appendix F.**

2.3 ADJOINING UTILITIES

There are no major utilities surrounding the Site. (**Appendix F** refers.)

2.4 ADJOINING STRUCTURES

There are existing temple and temporary structure on the South of the Site.

2.5 ADJOINING GEOTECHNICAL FEATURES

Adjoining Features are 5NE-D/C2 (1-7), 5NE-D/F1 (1-6) and 5NW-D/R8. All relevant Basic Data sheets are attached in **Appendix G.**

5NE-D/C2 (1) is responsible by Lands Department and 5NE-D/C2 (2-7) is mixed responsibility by Lot 1744 A, B, C, F, H, & I.
5NE-D/F1 (1-6) is mixed responsibility by Lot 1744 A, I, RP, G, F, E & RP.
5NE-D/R8 is responsible by Lot 1744 DRP.

3. PROPOSED DEVELOPMENT

The proposed works only involve converting the existing Tin Kwong Lun Yee into a Religious Institution and Columbarium (**Appendix B** refers). It does not call for any new structure. Hence, no site formation nor foundation work would be required. Based on the latest layout plan :

3.1 Stability Check to Existing Registered Features

There are three registered geotechnical features abutting the platform 5NE-D/C2, 5NE-D/R8) and 5NE-D/F1. The former has stage 2 Study Report been carried out. However, the results of the slope stability shown that the Factor of Safety are below 1.2. Further study is required in the detail design. Also, 5NE-D/F1 and 5NE-D/R8 are required further study. Remedial works to those subject slope shall be carried out if find necessary.

Existing Registered Feature 5NE-D/C2(1) is maintained by Lands Department. Its overall stability will be rechecked under this redevelopment. If slope upgrading works is required prior consent will be obtained from Lands Development for such works.

3.2 Proposed Widening on Local Access Road

The proposed road widening is in fact improvement to the existing 5m approximately wide hard paved access leading from the roundabout at end of Hing Fu Street to the Site. (Appendix B refers). The proposed improvements are adding on a 1.5m side footpath and 3 passing bays for light bus. A layout plan (Figure 4) added in Appendix C for easy reference, it presented the alignment of the access road and its surrounding area. Photographic views are added in Appendix A. Critical Sections are presented as Figure 5 in Appendix C, it can be seen that the areas adjacent to the hard paved access are relatively flat. Therefore, proposed improvement involved very minimal geotechnical contents, with most areas on both sides of the Access Road are fairly gently sloping. Angles of gradient along the existing access road alignment are shown in Figure 4.

3.2.1 Additional of 1.5 wide footpath to incorporate a 1.5m wide footpath to the existing access path actually do not involve major cutting new filling works. Section A-A reflected typical condition of the existing access road and proposed 1.5 footpath.

3.2.2 Additional of Passing Bay – the conditions are basically same as the 1.5m footpath. Sections B-B to D-D presented the existing access road, and proposed passing bay plus footpath. Very minimal earthwork is envisaged. However, passing by near roundabout encroach western tip of 5NE-D/F31, stability check of this portion is required.

3.3.3 Adjacent Registered Geotechnical Features – the nearest 3 Registered Features at roundabout of Hing Fu Street are 5NE-D/FR32, 5NE-D/F31 and 5NE-D/FR27. All 3 Features will not be affected by the proposed road widening works (Figure 4 in Appendix C refers).

4. EFFECT ON ADJACENT GROUND

The proposed Development involved converting the existing premises into institution use, no major site formation works nor building works are required. Basically, alternation works need to be done would not adversely affect adjacent ground as there would be no increase in loading conditions. However, the surrounding sloping ground whether registered or not registered required further study. In this Report, Feature 5NE-D/C2, 5NE-D/F1 and 5NE-D/R8 are identified as detail studies are necessary for the Development. Western tip of 5NE-D/F31 for access path widening.

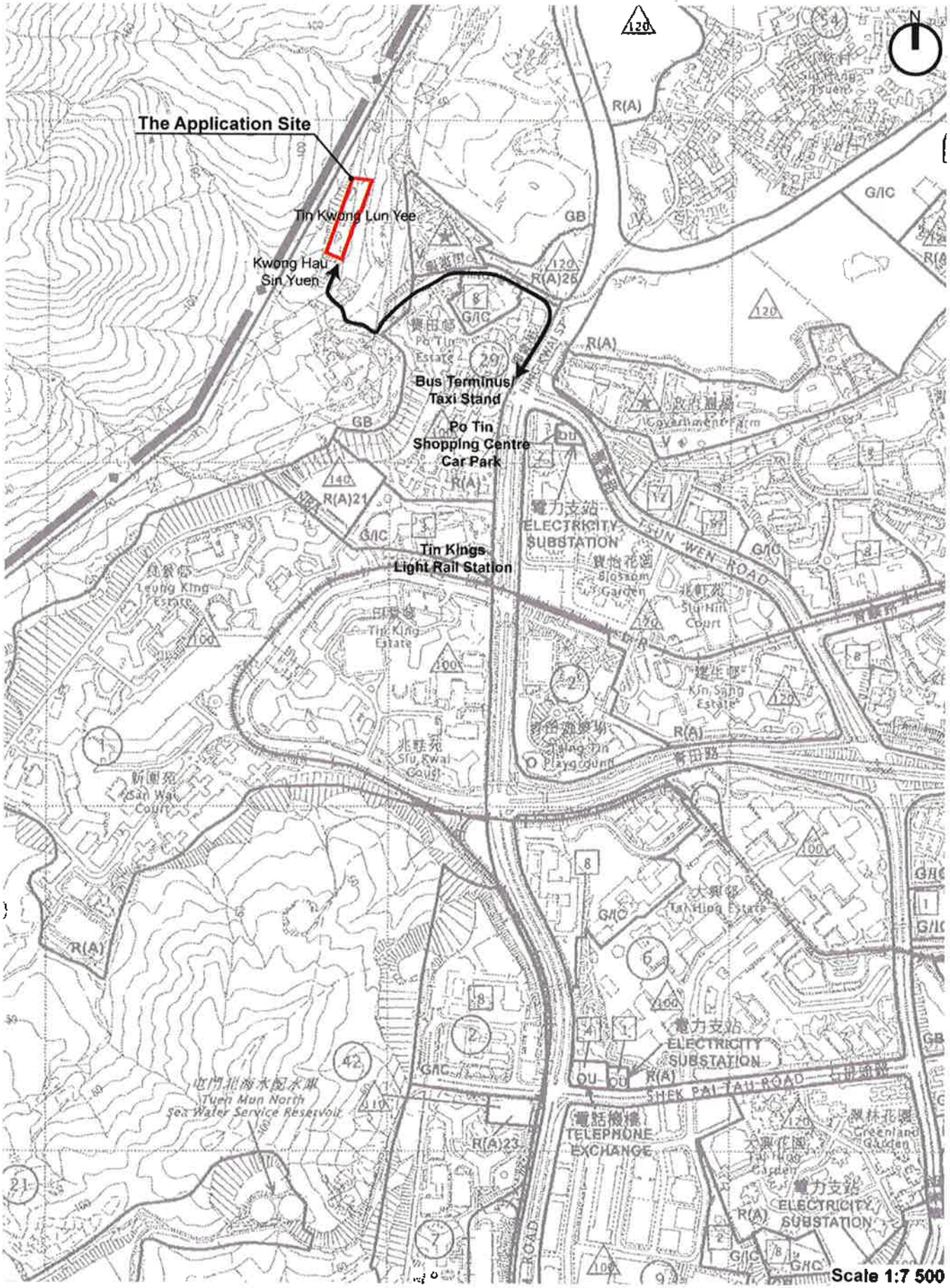
5. CONCLUSIONS AND RECOMMENDATIONS

The proposed development as presented on the General Building Plan is geotechnical feasible. Based on the existing site settings, the study of adjacent sloping ground is considered required. In addition to the proposed Development, it should be noted that minor encroachment is envisage for passing by at western tip of 5NE-D/F31. All affected Registered Features shall be studied and improvement works shall be carried out if found necessary. Lot Owners shall pick up the long term maintenance responsibility for all affected Registered Features under this GPRR.

Based on geological map sheet, GASP and adjacent GI records, no adverse geology is envisaged. The Site comprised of colluviums overlain insitu soil, with low bedrock level. Site geology would not present limitations / constraints to the development.

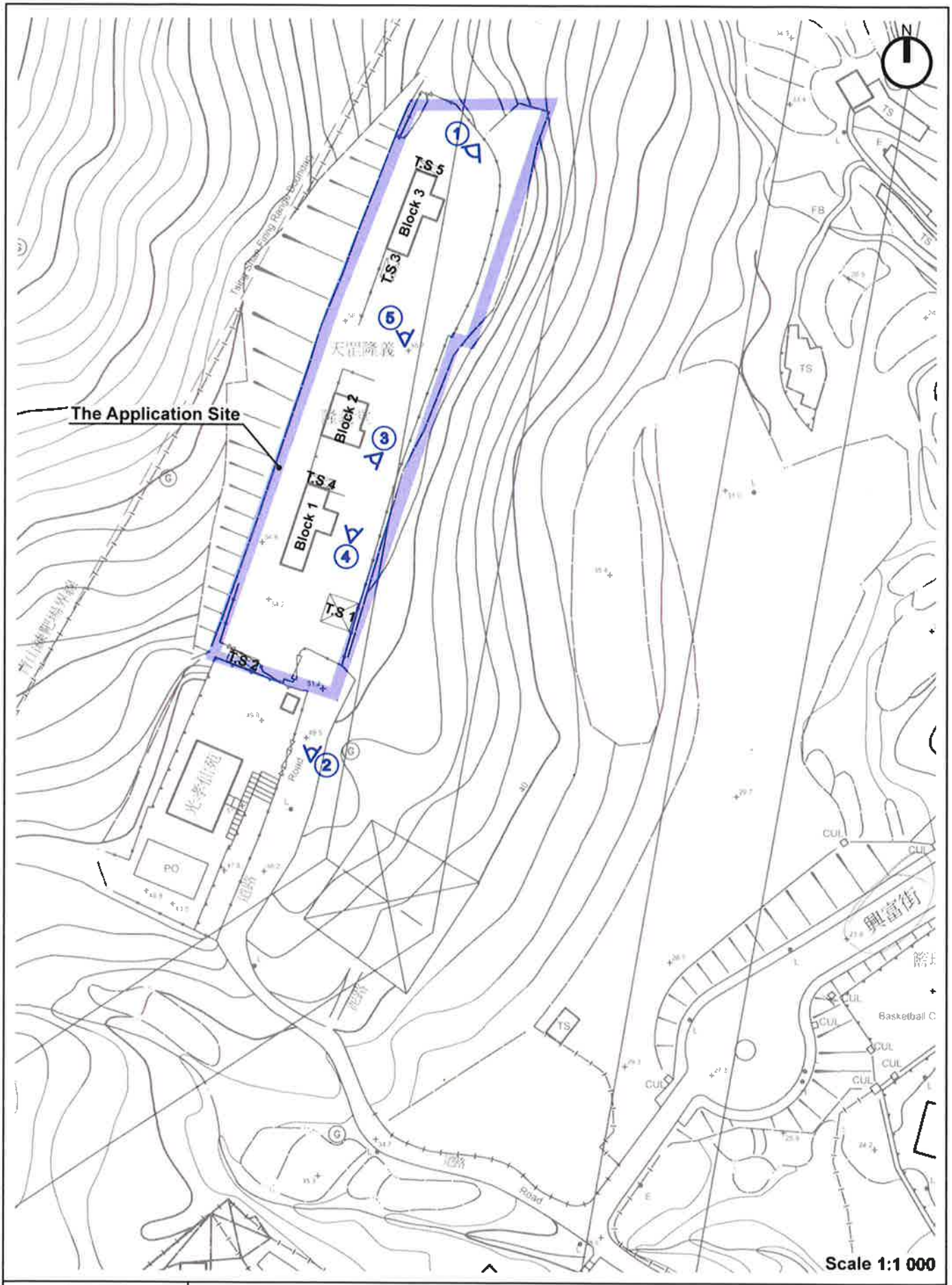
APPENDIX A

A1 Location Plan
A2 Site Plan
A3 Site Location Plan showing relevant Features
A4 Site Photos
A5 Site Photos of existing local access road



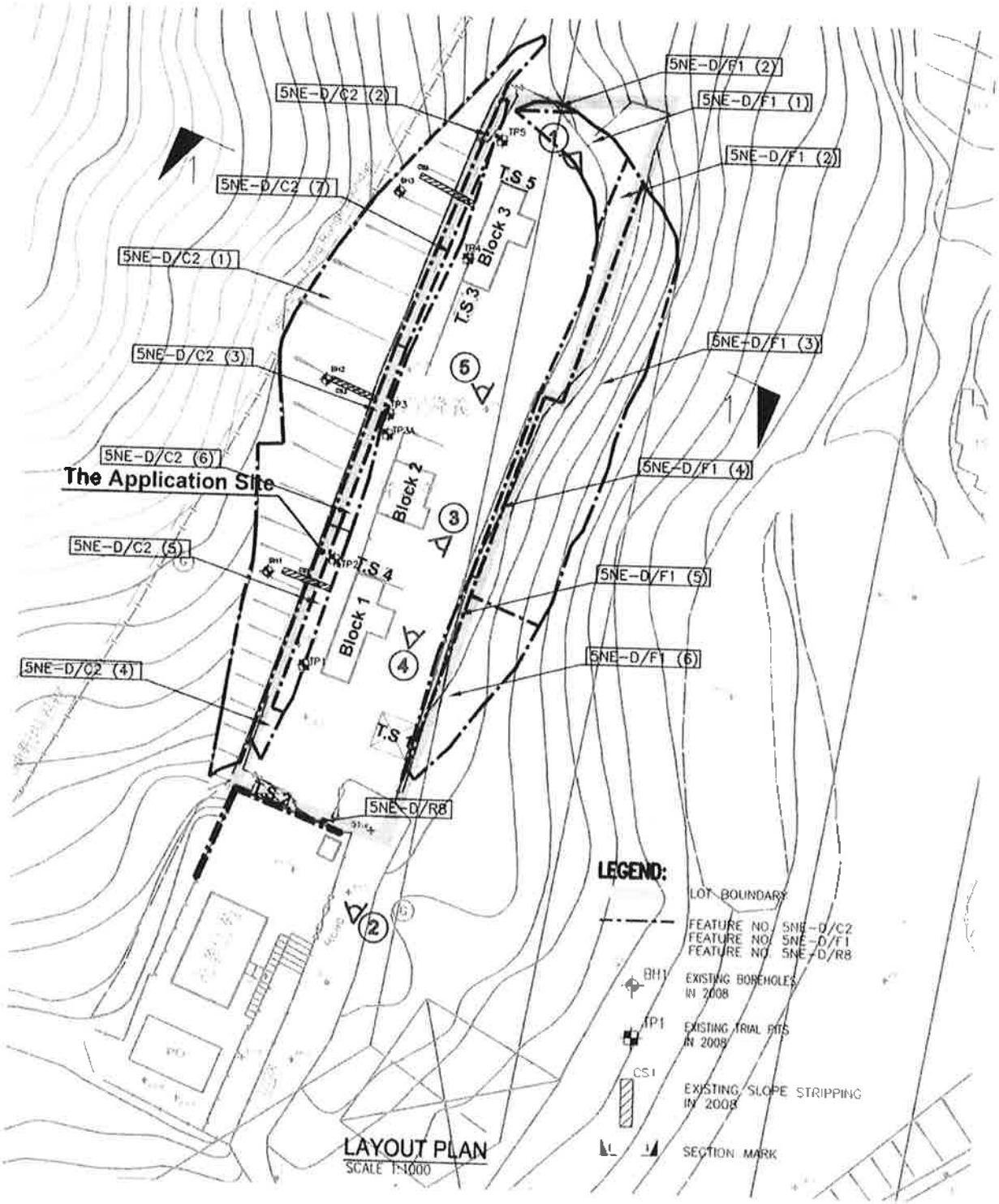
TOCO

A1 - Location Plan



TOCO

A2 - Site Plan



A3 - Site Location Plan showing relevant Features

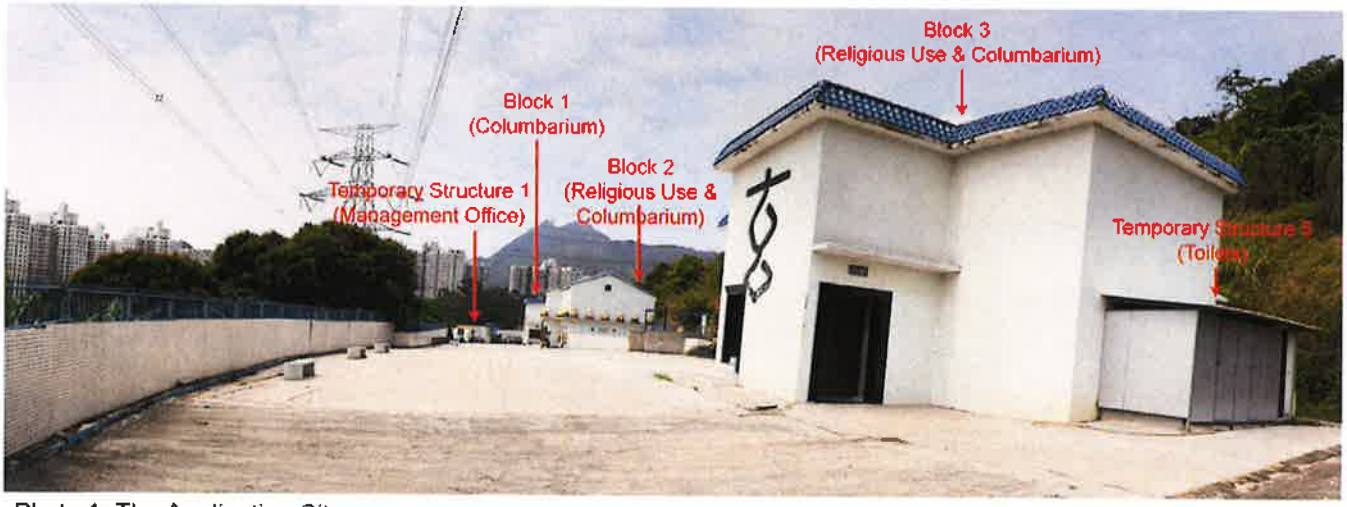


Photo 1: The Application Site



Photo 2: Entrance of the Site

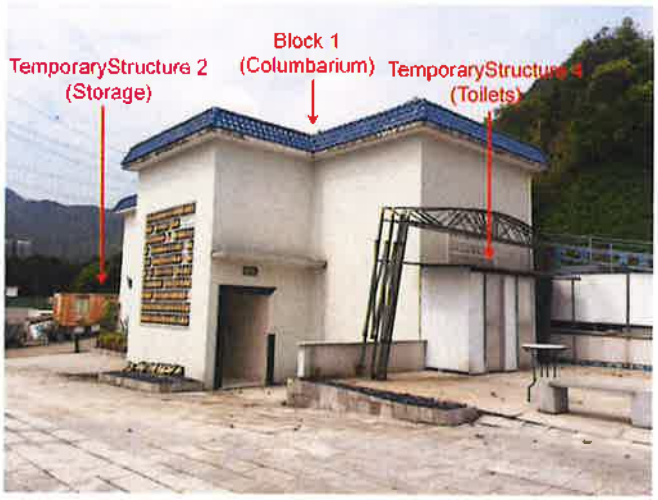


Photo 3: Block 1 (黃庭堂 at G/F and 玄武堂 at 1/F)



Photo 4: Block 2 (地殿堂 at G/F and 天宮堂 at 1/F)



Photo 5: Block 3 (信眾靈修研習處)

TOCO

A4 - Site Photos

A5 - Site Photos of Existing Local Access Road



V1



V3



V2



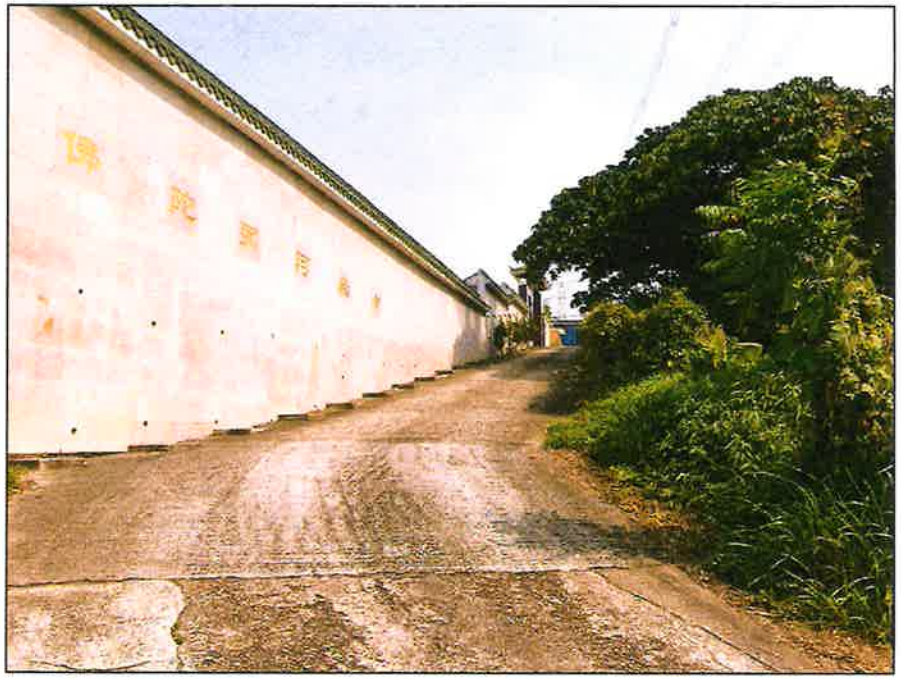
V4

LAYOUT REFER TO FIGURE 4 IN APPENDIX C

A5 - Site Photos of Existing Local Access Road



V5



V7



V6

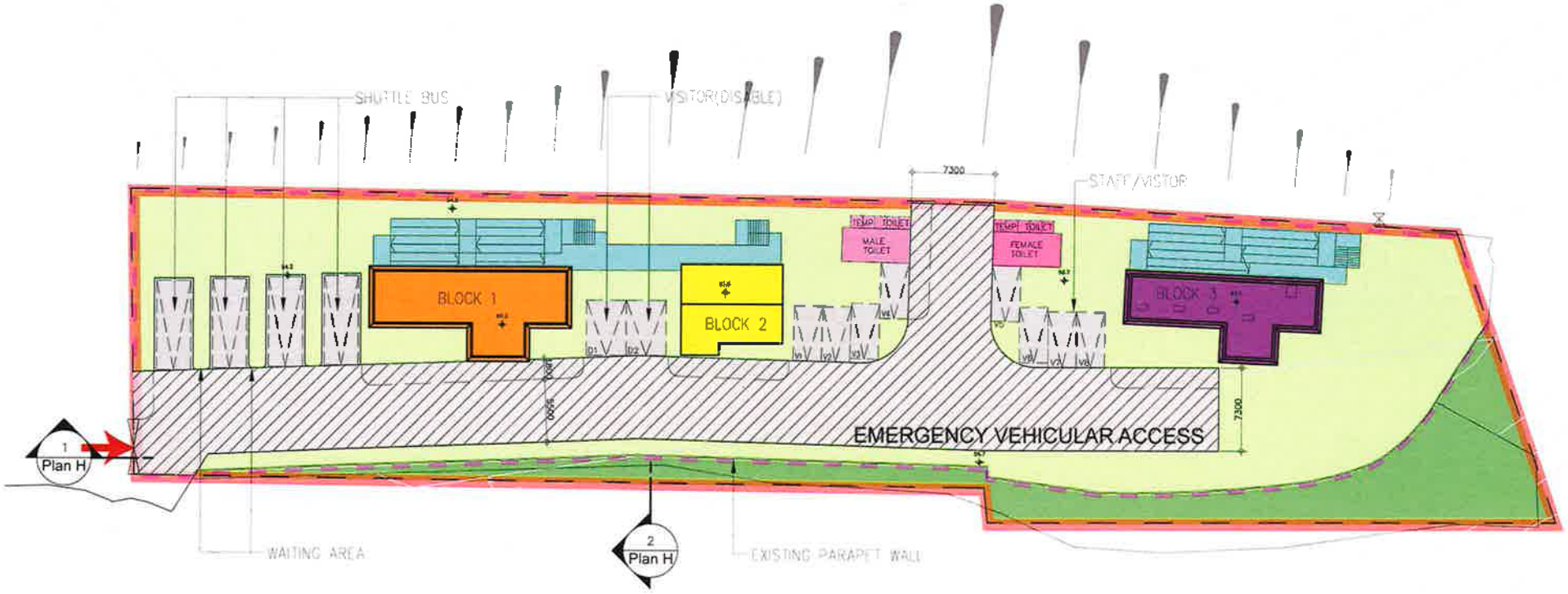
LAYOUT REFER TO FIGURE 4 IN APPENDIX C

APPENDIX B

RELEVANT GBP PLANS AND PROPOSED ACCESS ROAD WIDENING

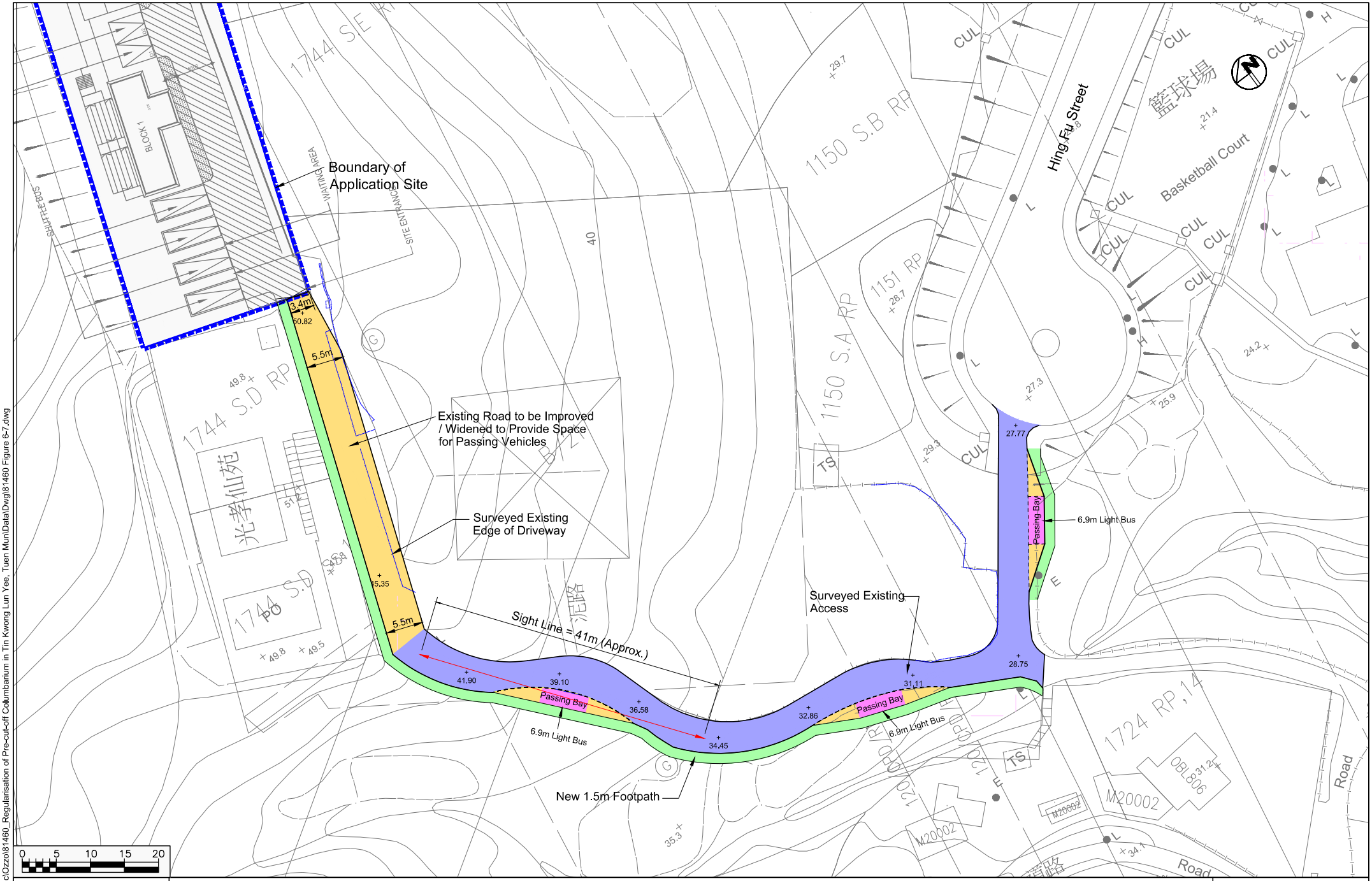
Legend

- The application site
- Existing concrete platform within the application site
- Internal access and transport facilities
- Site entrance
- Landscape and Pedestrian circulation area
- Vegetated slope outside the application site
- Columbarium
- Columbarium and management office
- Religious Use and Columbarium
- Temporary Toilet
- Access ramp
- Pedestrian Zone



Scale 1:300

Plan F: Master Layout Plan



\\192.168.1.99\public\Ozzo\81460_Regularisation of Pre-cut-off Columbarium in Tin Kwong Lun Yee, Tuen Mun\Data\Dwg\81460 Figure 6-7.dwg

OZZO TECHNOLOGY

Date 23/12/2020 | Scale 1:500

Section 12A Planning Applications for Regularization of Pre Cut-Off Columbarium in Tin Kwong Lun Yee, Tuen Mun, New Territories

Layout of Proposed Widening On Local Access Road and New Lay-By

天罡隆義

Project No. 81460 | Rev. -

Dwg No. Figure 6-7

APPENDIX C

PROPOSED SITE LAYOUT PLAN AND SECTION AND EXTEND OF PROPOSED NTHS STUDY AREA AND PROPOSED WIDENING WORKS TO EXISTING LOCAL ACCESS ROAD

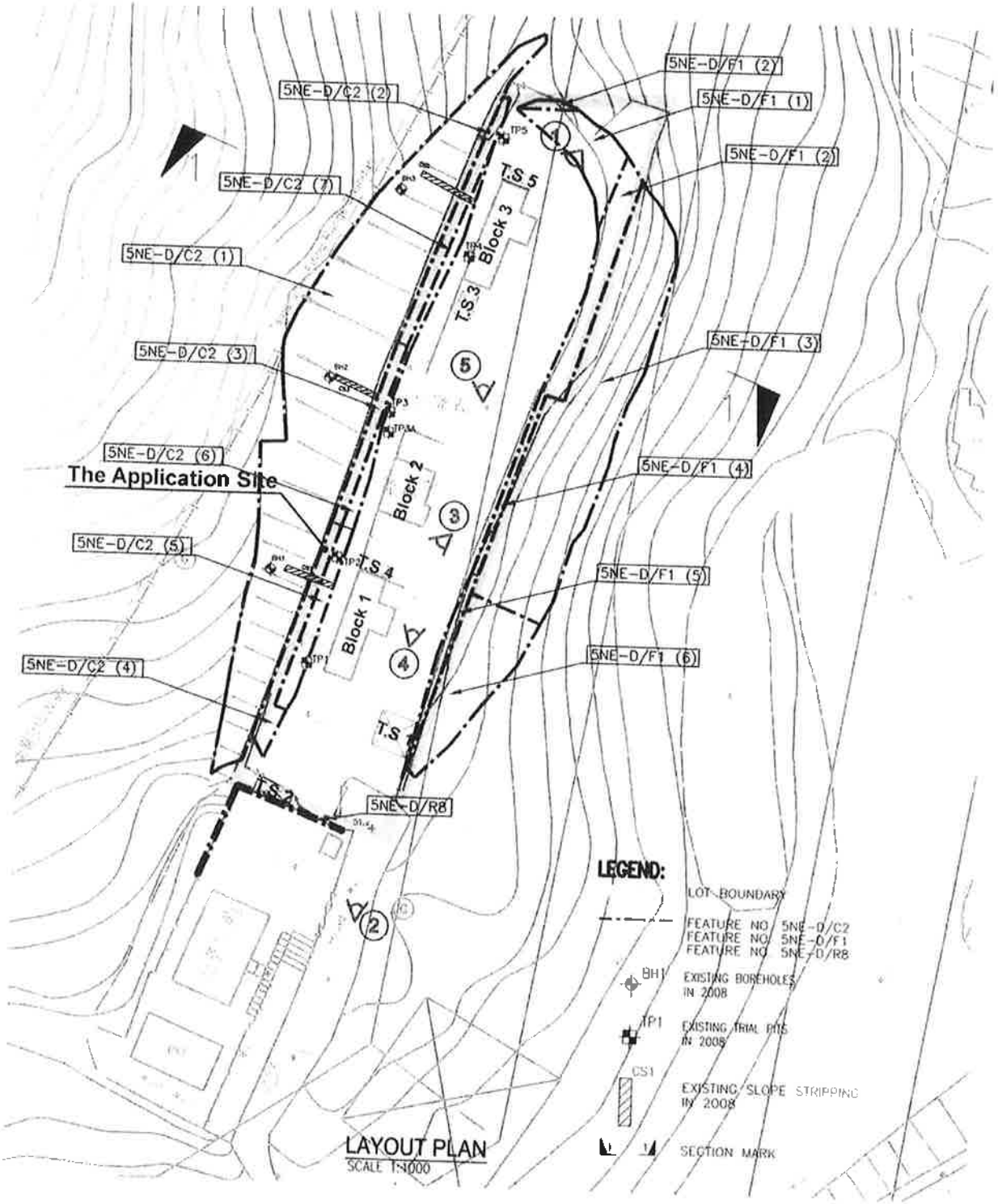
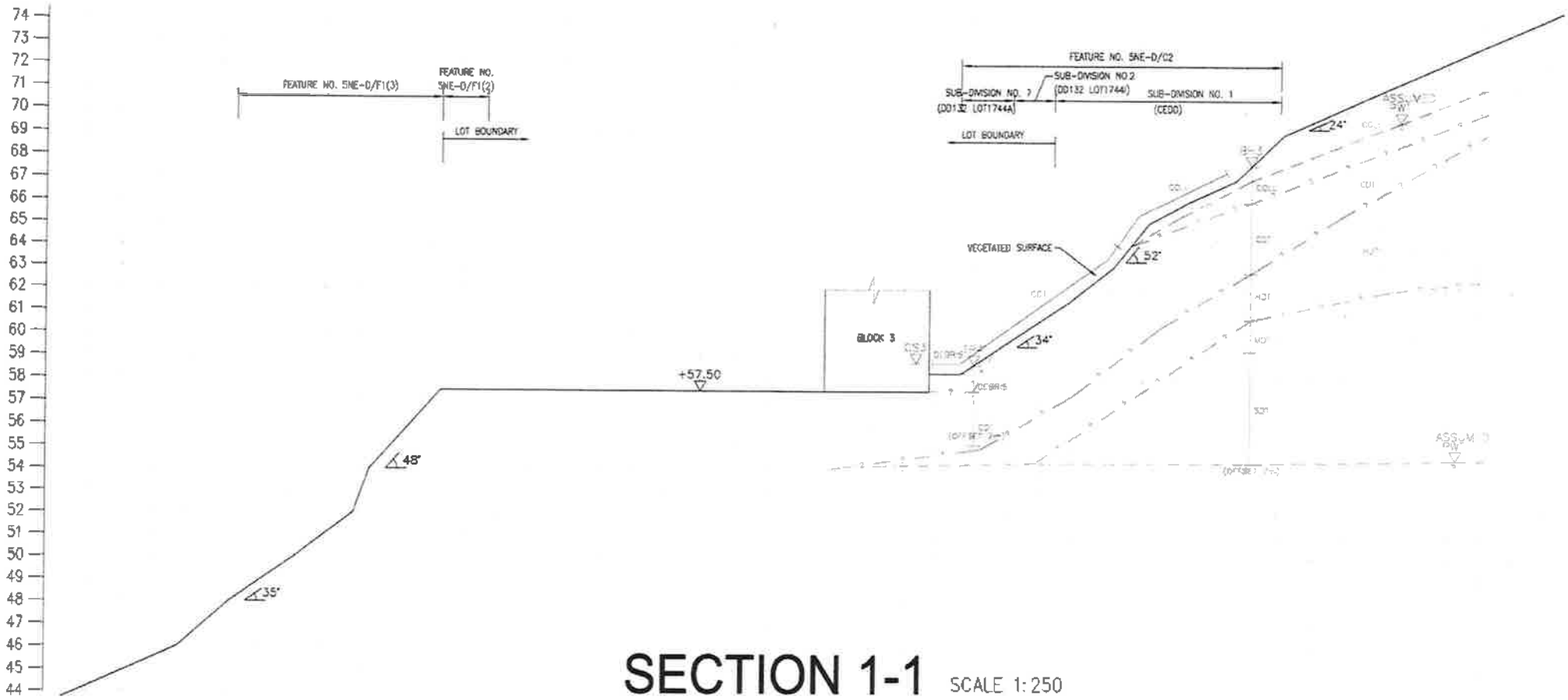
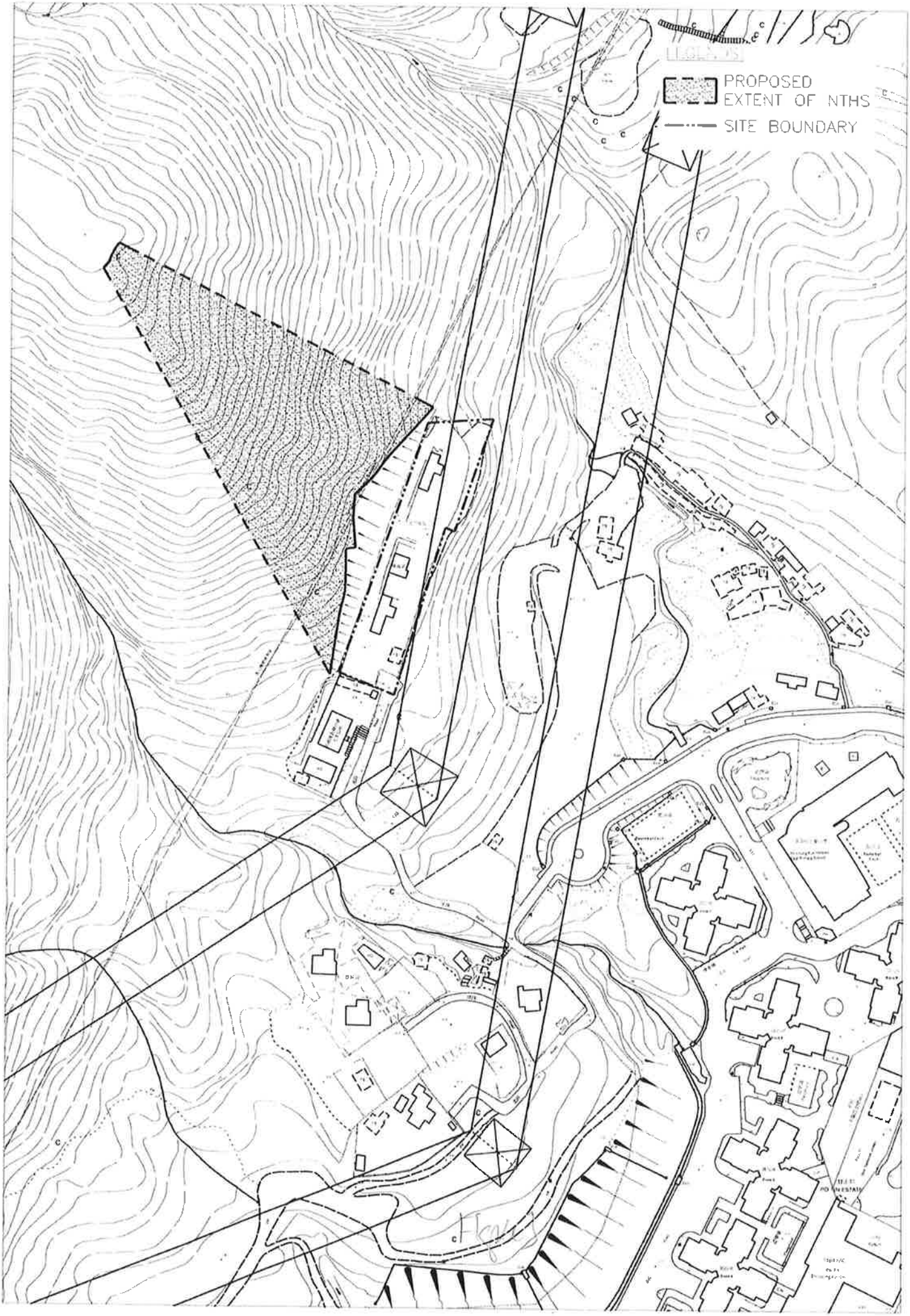

5NE-D/C2 (2)
5NE-D/C2 (7)
5NE-D/C2 (1)
5NE-D/C2 (3)
5NE-D/C2 (6)
The Application Site
5NE-D/C2 (5)
5NE-D/C2 (4)
5NE-D/R8
5NE-D/F1 (2)
5NE-D/F1 (1)
5NE-D/F1 (2)
5NE-D/F1 (3)
5NE-D/F1 (4)
5NE-D/F1 (5)
5NE-D/F1 (6)
T.S 5
T.S 3
T.S 4
T.S 1
T.S 2
Block 3
Block 2
Block 1
TP5
TP3
TP1
BH2
BH1
1
2
3
4
5
LEGEND:
LOT BOUNDARY
FEATURE NO. 5NE-D/C2
FEATURE NO. 5NE-D/F1
FEATURE NO. 5NE-D/R8
BH1 EXISTING BOREHOLES IN 2008
TP1 EXISTING TRIAL PITS IN 2008
CS1 EXISTING SLOPE STRIPPING IN 2008
SECTION MARK
LAYOUT PLAN
SCALE 1:1000

Figure 1



SECTION 1-1 SCALE 1:250

Figure 2


PROPOSED
EXTENT OF NTHS
SITE BOUNDARY

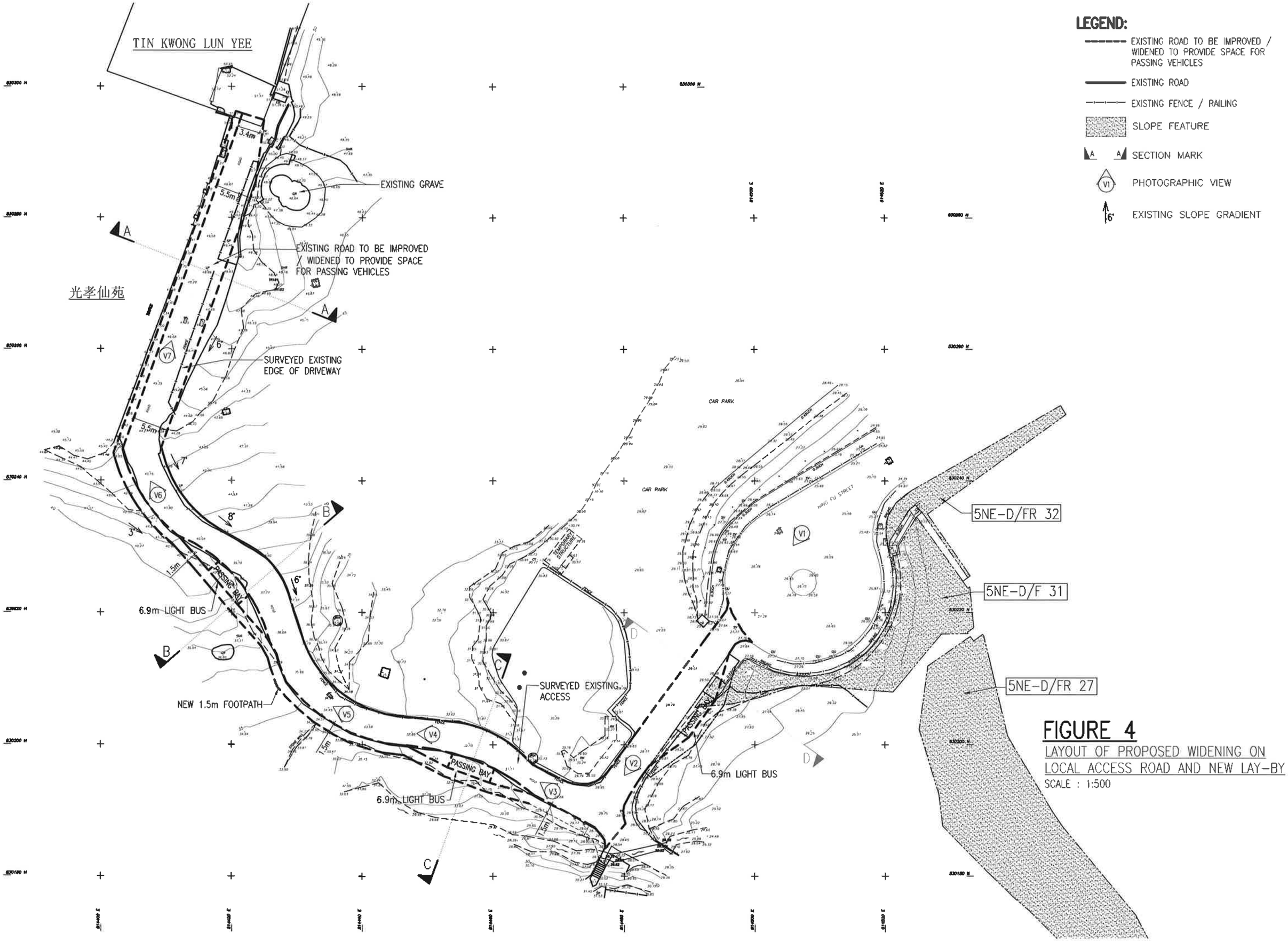
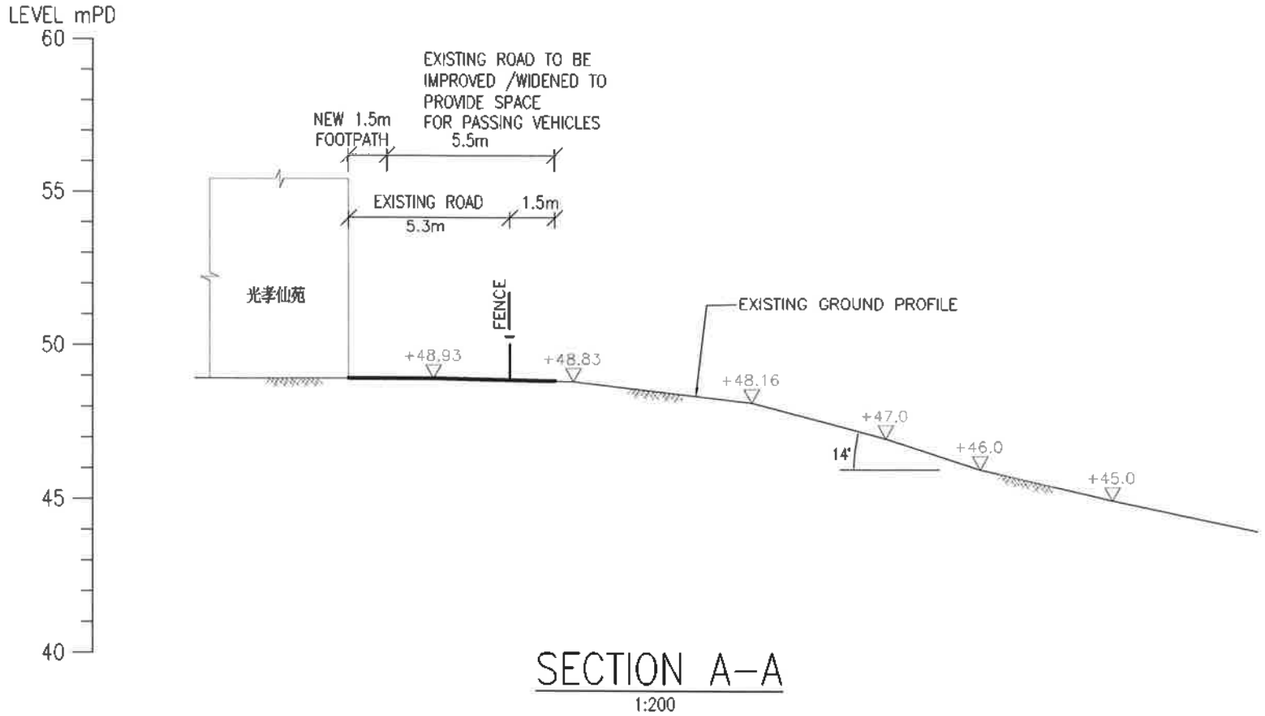


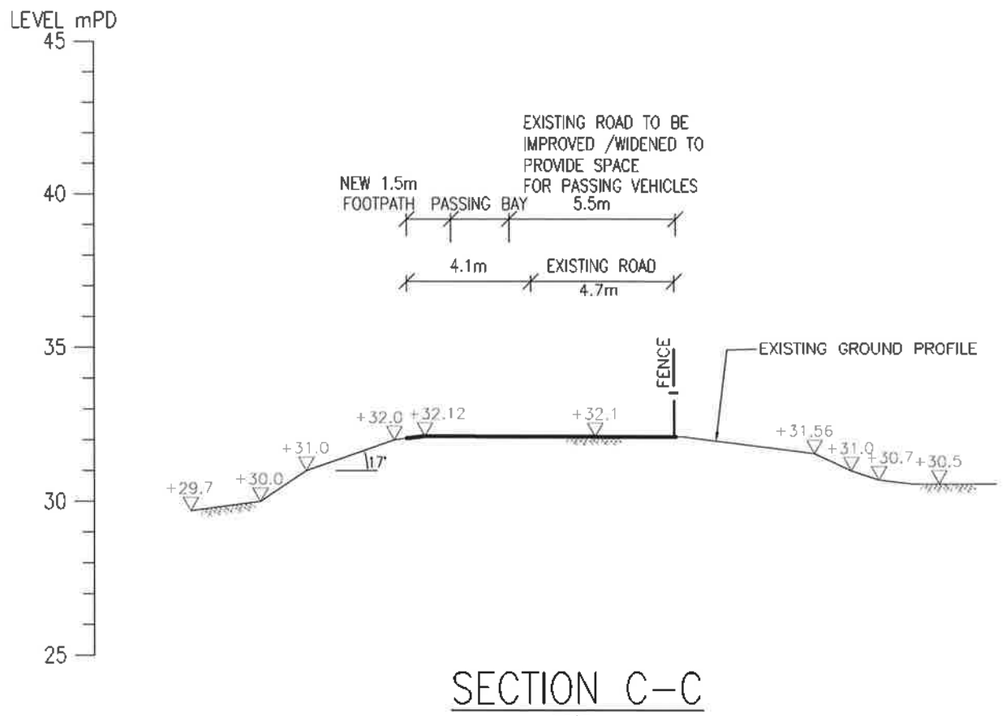
FIGURE 4

LAYOUT OF PROPOSED WIDENING ON LOCAL ACCESS ROAD AND NEW LAY-BY

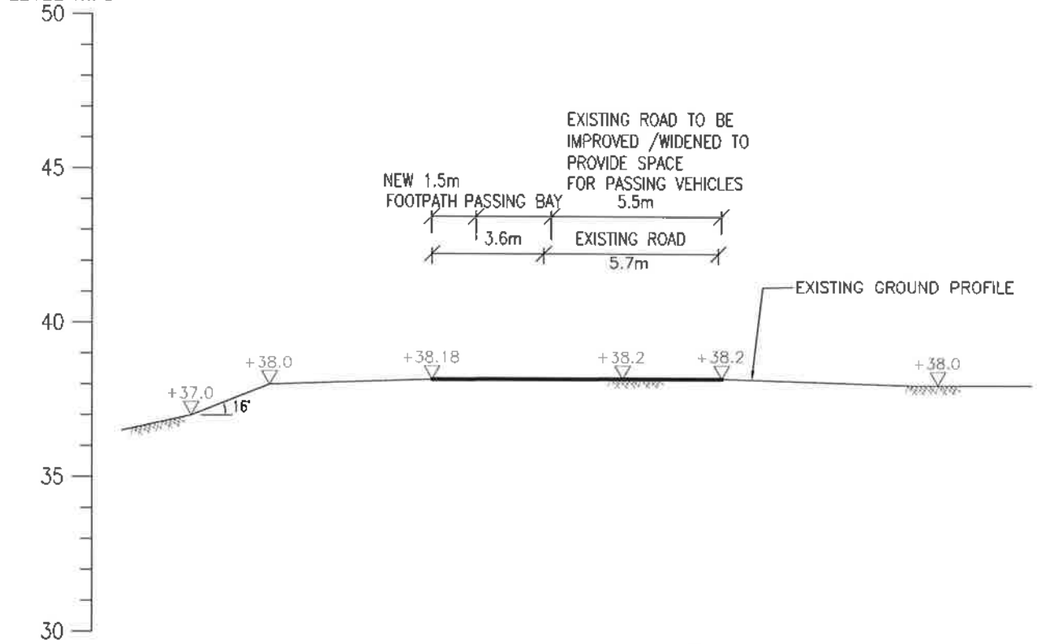
SCALE : 1:500



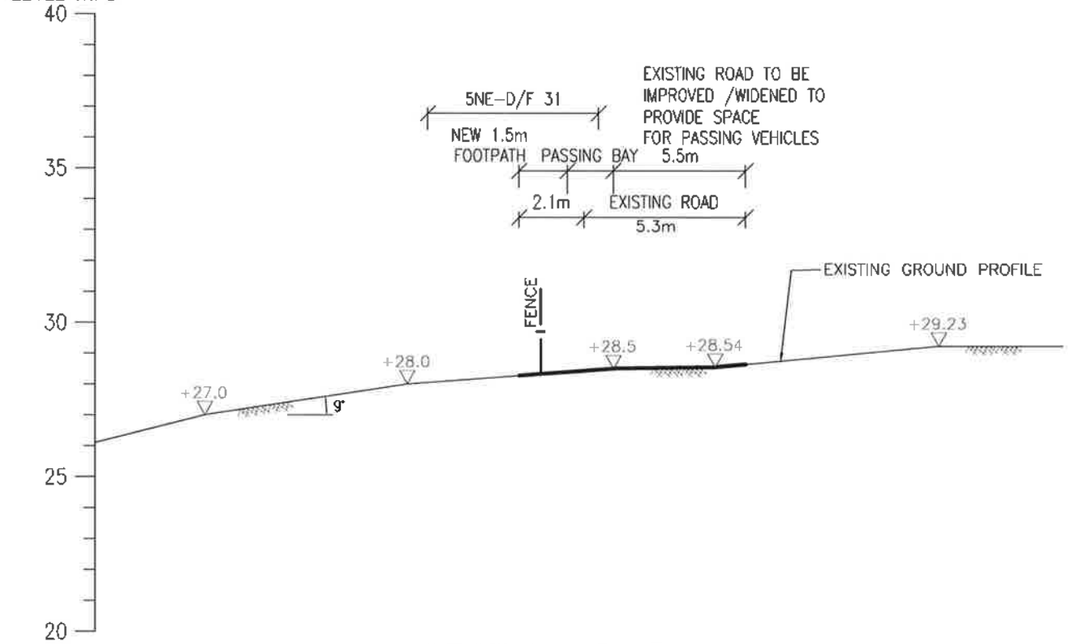
SECTION A–A
1:200



SECTION C–C
1:200



SECTION B–B
1:200



SECTION D–D
1:200

FIGURE 5

SECTIONS OF PROPOSED WIDENING ON LOCAL ACCESS ROAD AND NEW LAY–BY

APPENDIX D

GEOLOGICAL MAP AND GASP

HONG KONG GEOLOGICAL SURVEY
香港地質調查
TSING SHAN (CASTLE PEAK) 青山
Sheet 5 編號
SOLID AND SUPERFICIAL GEOLOGY 基岩和表土地質圖

Series HGM20 組別

Scale 1:20 000 比例

SUPERFICIAL DEPOSITS 地表沉積

	GENETIC CLASSIFICATION 成因類型		主要物質成份 PRINCIPAL MATERIALS
第四系 QUATERNARY — 全新統 HOLOCENE	Fill ..... 填土		填泥和廢物 ..... Natural earth and waste
	Beach deposits ..... 海灘沉積	Qb	砂 ..... Sand
	Raised beach deposits ..... 高位海灘沉積	Qrb	砂 ..... Sand
	Alluvium ..... 冲積物	Qa	分選性頗好至中等的粘土／粉砂、砂和礫石 ..... Clay/silt, sand and gravel; well-sorted to semi-sorted
坑口組 HANG HAU FORMATION		QHH	主要深灰色海相泥（未分） ..... Undivided, mainly dark grey marine mud
		ms	海相砂，部份粉砂質 ..... Marine sand, part silty
更新-全新統 PLEISTOCENE AND HOLOCENE	Debris flow deposits ..... 坡積、洪積物	Qd	未分選的砂、礫至漂礫，基質爲粘土／粉砂 ..... Unsorted sand, gravel, cobbles and boulders; clay/silt matrix
	Talus (rocktall) deposits ... 岩屑(岩崩)堆積物	Qt	具稀小細粒基質的礫石至漂礫 ..... Gravel, cobbles and boulders; sparse finer-grained matrix
更新統 PLEISTOCENE	Terraced alluvium ..... 階地冲積物	Qpa	分選性頗好至中等的礫質、砂質粘土／粉砂 ..... Clay/silt, gravelly sandy, well-sorted to semi-sorted
	Debris flow deposits ..... 坡積、洪積物	Qpd	未分選；夾陳石的泥質粉砂／砂 ..... Silt/sand, clayey with cobbles and boulders; unsorted
赤蜡角組 CHEK LAP KOK FORMATION		QCK	紅色、黃色和灰色的粘土，粉砂，砂和礫石（未分） ..... Undivided; red, yellow and grey clay, silt, sand and gravel

SOLID GEOLOGY 基岩地質

SEDIMENTARY AND VOLCANIC ROCKS 沉積岩和火山岩

	NAMED ROCK DIVISIONS 地層單位名稱		主要岩石類型/特徵 PRINCIPAL ROCK TYPES/CHARACTERS
中生界 MESOZOIC — 上侏羅統 UPPER JURASSIC — 蓆水灣群 REPULSE BAY VOLCANIC GROUP	Tuen Mun Formation, undivided ..... 屯門組（未分）	JTU	安山岩夾凝灰岩和層凝灰岩 ..... Andesite with tuff and tuffite
	Tsing Shan Formation, undivided ..... 青山組（未分）	JTS	砂岩、粉砂岩和泥岩夾礫岩和凝灰岩 ..... Sandstone, siltstone and mudstone with conglomerate and tuff
		t	未分的凝灰岩和層凝灰岩 ..... Undifferentiated tuff and tuffite
		bt	含火山塊凝灰岩和層凝灰岩 ..... Block-bearing tuff and tuffite
		cg	礫岩 ..... Conglomerate

MAJOR INTRUSIVE IGNEOUS ROCKS 主要侵入火成岩

中生代 MESOZOIC — 侏羅-白堊紀 JURASSIC-CRETACEOUS

Megacrystic 具大斑晶的

gf	細粒花崗岩，0.06－2毫米	Fine-grained granite, 0.06-2mm
gfm	中細粒花崗岩	Fine- to medium-grained granite
gm	中粒花崗岩，2－6毫米	Medium-grained granite, 2-6mm

MINOR INTRUSIVE IGNEOUS ROCKS 次要侵入火成岩（脈岩）

TERTIARY 第三紀

b	輝綠岩	Basalt
l	煌斑岩	Lamprophyre

中生代 MESOZOIC — 侏羅-白堊紀 JURASSIC-CRETACEOUS

rq	石英斑岩	Quartzphyric rhyolite
rf	長石斑岩	Feldsparphyric rhyolite
ap	細晶岩	Aplite
q	石英脈	Quartz

METAMORPHIC ROCKS 變質岩

	糜稜岩	Mylonite
	片岩	Schist
	變質岩石	Metamorphosed

White wave ornament indicates water cover over specified rock types; blue wave ornament indicates water cover over unsurveyed sea bed

白色波紋表示該區岩石受水覆蓋，藍色波紋表示爲海水覆蓋未經勘探之海床

GEOLOGICAL LINES 地質界綫

Geological boundary, superficial deposit	地表沉積地質界綫
Fill boundary, with limit of reclamation at date shown (1983)	填土區界綫，附填土年份
Geological boundary, solid rock	基岩地質界綫
Fault (crossmark indicates downthrow side)	斷裂（短劃指向下降盤）
Mineral vein	礦脈
Photogeological lineament	航攝地質綫性影像

Broken lines on map face denote uncertainty * 圖內虛綫表示推測界綫

STRUCTURAL SYMBOLS 構造符號

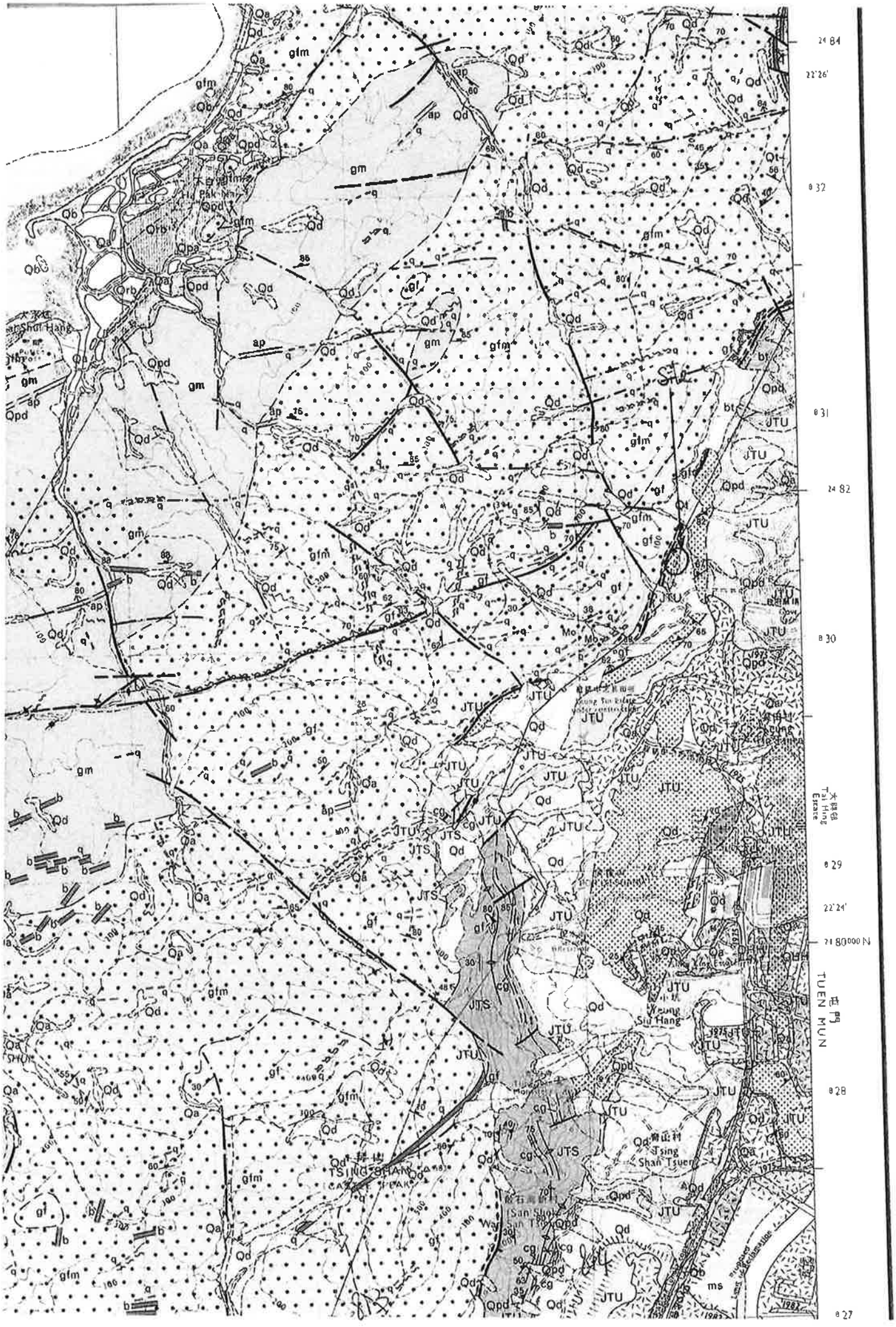
	傾斜 Inclined	垂直 Vertical	倒轉 Overturned	
Bedding	20		20	層理
Jointing	20			節理
Foliation	20			叠理
Intrusive contact	20			侵入接觸
Fault plane	20			斷裂面
Anticline axial trace (major)				背斜軸迹綫（主要）
Syncline axial trace (major)				向斜軸迹綫（主要）

All dips and plunges measured in degrees from horizontal 所有傾角和傾伏角的角度均從水平位置起計

MINERAL SYMBOLS 礦產符號

Mineral occurrence • Mo	礦產

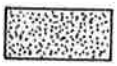
Chalcopyrite Cu 黃銅礦 Magnetite Fe 磁鐵礦


TUEN MUN
屯門
Tai Hing Estate
大興邨
Siu Hang
Tsing Shan Tsuen
TSING SHAN
JTU
JTS
Qa
Qb
Qd
Qpd
Qpa
Qrb
gfm
gm
gf
ap
cg
ms
bt
Mo
Mb
N 821 000 N
22°26'
22°24'
114°02'
114°01'
114°00'
113°59'
113°58'
113°57'
113°56'
113°55'
113°54'
113°53'
113°52'
113°51'
113°50'
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113°27'

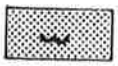
LEGEND

CLASS	CODE	GEOTECHNICAL LIMITATIONS	SUITABILITY FOR DEVELOPMENT	ENGINEERING COST FOR DEVELOPMENT	INTENSITY OF SITE INVESTIGATION REQUIRED
I		Low	High	Low	Normal
II		Moderate	Moderate	Normal	Normal
IIs		Moderate	Moderate - Low	Normal - High	Normal
III		High	Low	High	Intensive
IV		Extreme	Probably Unsuitable	Very High	Very Intensive

General Features - terrain which is not classified within GLUM system.


Waterbodies (streams, man-made channels, storage dams)


Ponds


Littoral zone (generally subject to tidal action).

Note : THIS MAP PROVIDES A BASIC GEOTECHNICAL ASSESSMENT OF THE TERRAIN FOR PLANNING AND LAND MANAGEMENT PURPOSES. IT IS NOT DESIGNED FOR DETAILED GEOTECHNICAL APPRAISAL OF INDIVIDUAL SITES

Title:	**GEOTECHNICAL LAND USE MAP – WEST NEW TERRITORIES**
Compiled: M.J.Dale	**Drawn:** P.L.Tsang
Scale: 1:20 000	**Date:** August 1983
Map Ref. No.: EG/20/GAS 15/1	**Sheet:**

GLUM

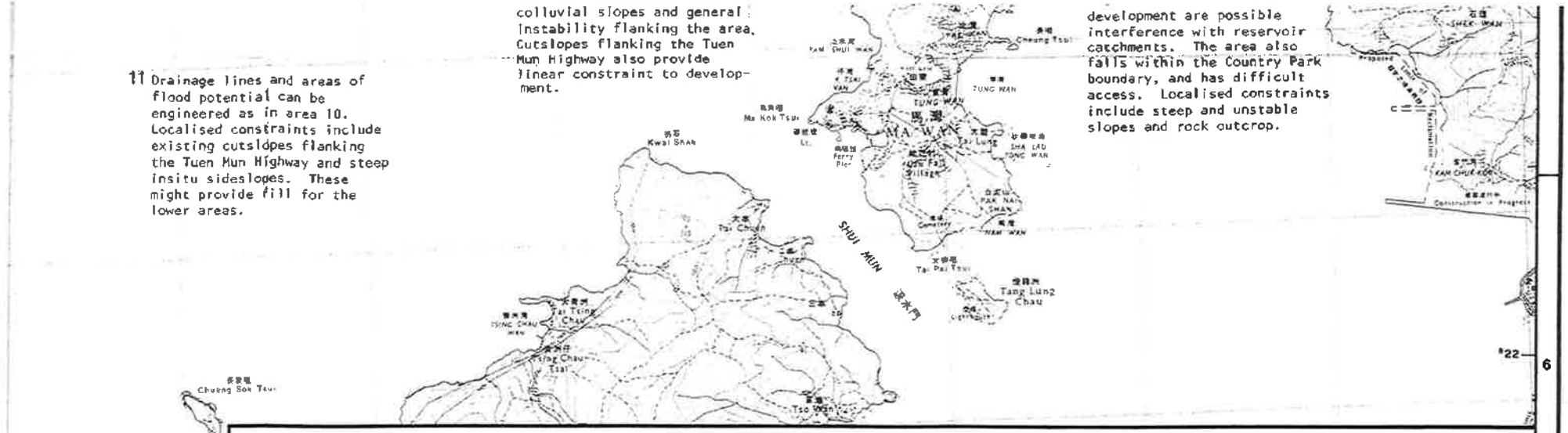
GLUM


C
D
814
805
816
Firing Range
Tsz Tin Tsuen
Shek Pai Tau
TUEN MUN

11 Drainage lines and areas of flood potential can be engineered as in area 10. Localised constraints include existing cutslopes flanking the Tuen Mun Highway and steep insitu sideslopes. These might provide fill for the lower areas.

colluvial slopes and general instability flanking the area. Cutslopes flanking the Tuen Mun Highway also provide linear constraint to development.

development are possible interference with reservoir catchments. The area also falls within the Country Park boundary, and has difficult access. Localised constraints include steep and unstable slopes and rock outcrop.





LEGEND

DEVELOPMENT PLANNING ZONES :

- Zone of potential for development (assessed in geotechnical terms)
- Zone of local geotechnical constraints (identified on PCM) within general PDA
- Zone of constraints for development (assessed principally in geotechnical terms)
- Zone of existing development, (based on principal use of GEOTECS 2 hectare unit)
- Country Park boundary
- Firing Range boundary
- Catchwater
- NOTE Numerals on map refer to relevant general planning/engineering notes

FEATURES OF ENGINEERING SIGNIFICANCE :

- Photogeological lineament
- f—f Fault
- —R— Ridgeline
- Drainage, incised drainage
- Coll Colluvium (also in 'zone of local constraints', and PCM)
- W Weathering
- Boulders
- Instability influencing area
- Steeper slopes influencing area (orientation of symbols indicates downslope direction)

NOTE

i) Features are generally indicated only where of significance to identified potential development areas.

ii) For explanation of significance of identified features, see Report Appendix A, Table A6, and Section 4.2.

iii) Geological boundaries and photolineaments are shown in full on the EGM. Those lineaments indicated represent the surface expression of obvious structural discontinuities which affect the PDAs.

MAP – WEST NEW TERRITORIES

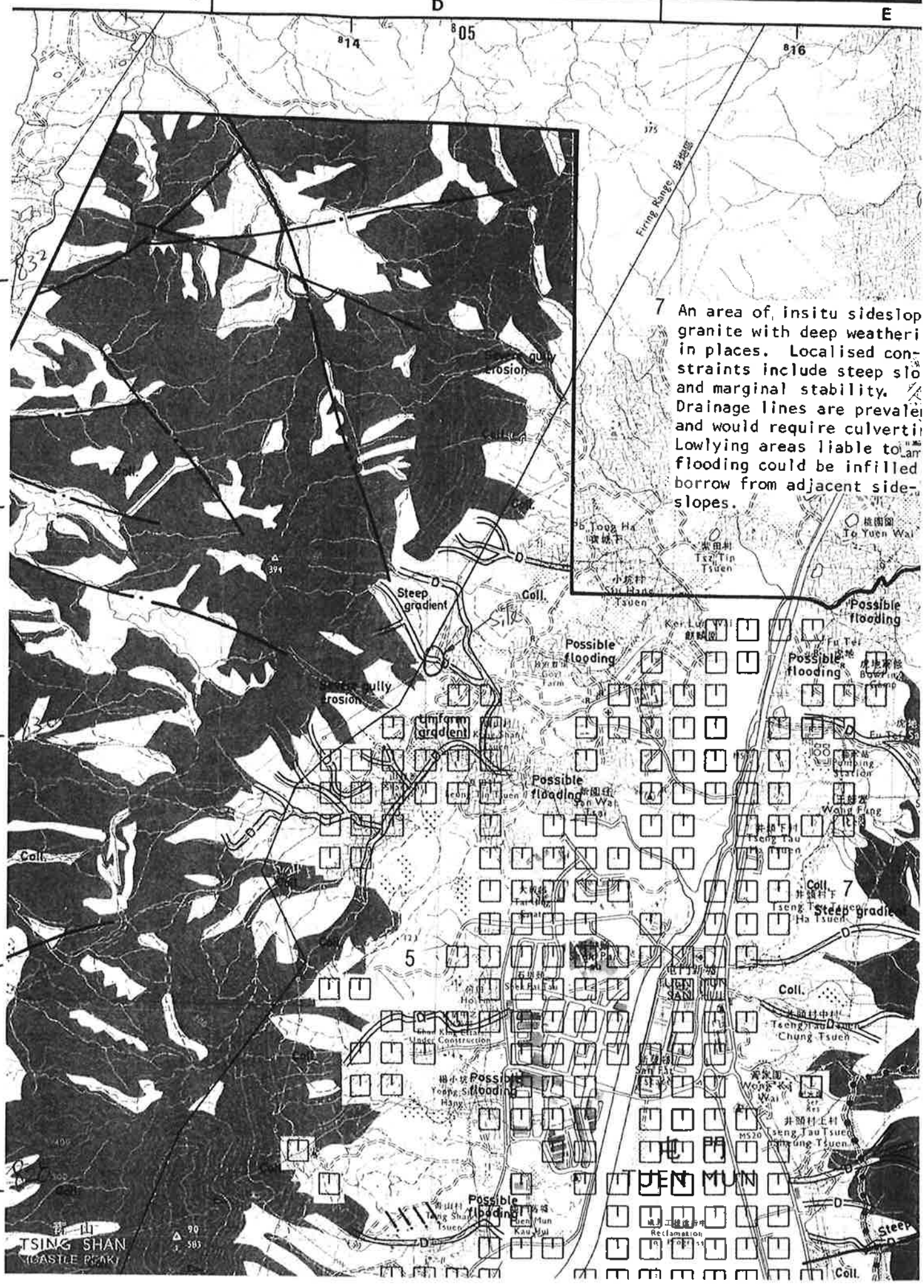
Title:	GENERALISED LIMITATIONS AND ENGINEERING APPRAISAL MAP WEST NEW TERRITORIES
Compiled: J.M. Nash	Drawn: C.P.Wan
Scale: 1:20 000	Date: April, 1984
Map Ref. No.: EG/20/GAS 15/15	Sheet:

G H I J

6 7 8

GLEAM

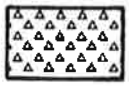
GLEAM

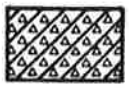


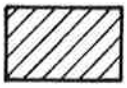
7 An area of insitu sideslop granite with deep weatheri in places. Localised con- straints include steep slo and marginal stability. Drainage lines are prevale and would require culverti Lowlying areas liable to flooding could be infilled borrow from adjacent side- slopes.



LEGEND

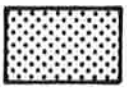

Colluvium


Zones of colluvium which are subject to overland flow and periodic inundation. Evidence of unusual groundwater regime (delineated as drainage plain on Landform Map).

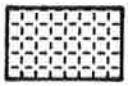

Floodplain - subject to overland flow and regular inundation. Evidence of unusual groundwater regime (delineated as floodplain on Landform Map).

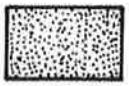

Zones of general instability associated with predominantly colluvial terrain.


Zones of general instability associated with predominantly insitu terrain.


Slopes on insitu terrain which are generally steeper than 30 degrees. (other than those delineated as colluvial or unstable).


Disturbed terrain - extensive cut and fill batters which generally exceed 30 degrees.


Instability on disturbed terrain


Water bodies (streams, man-made channels, storage dams).


Ponds


Moderate or severe gully erosion (may be superimposed upon other constraints)


Littoral zone (generally subject to tidal action).

Title: PHYSICAL CONSTRAINTS MAP – WEST NEW TERRITORIES	
Compiled: M. J. Dale	**Drawn:** C. P. Wan
Scale: 1:20 000	**Date:** December 1983
Map Ref. No.: EG/20/GAS 15/6	**Sheet:**

PCM

PCM


C
D
814
805
816
375
Firing Range
下白泥
Ha Pak Nai
Site
Po Tong Ha
Tsz Tin
Tsuen
Tuen
San Hing
Tsuen
Wai
Tseng Tau
Ha Tsuen
大興邨
Tai Hing
Estate
Shek Pai Tau
Ho Tin
Shan King Estate
Under Construction
123
屯門新墟
TUEN MUN
SAN HUI
MS20
屯 門
TUEN MUN
Tuen Mun
Kau Hui
Reclamation
in Progress



Map Unit	Weathering and Soil Development	Engineering Comment (Stability, Foundation, Hydrogeology)	Material Uses and Excavation Characteristics
INTRUSIVE IGNEOUS ROCKS (PLUTONIC) — CHEUNG CHAU GRANITE; TUNG KONG GRANITE	Rock sometimes produces a poor, thin (< 1 m) soil (pedogenic) horizon. In depth the decomposed rock is a silty sand with variable fine gravel content. Depth of weathering i.e. soft material, is often great and an average of 18 m has been quoted. Weathering to produce corestones is common.	Stability of the weathered material can be suspect, i.e. Zones A & B, where soil type failures may occasionally occur. Insitu material is subject to severe erosion. Special care must be taken in establishing adequate surface protection on newly formed slopes. Bearing capacity characteristics are good for moderate to high loads. Generally free draining. Rock is prone to discontinuity controlled failure in the fresh to moderately weathered state.	When weathered, the material can be machine excavated to considerable depth and is thus strongly favoured as a source of granular borrow. When fresh or slightly weathered, blasting is required. These rocks are highly favoured for aggregate production.
INTRUSIVE IGNEOUS ROCKS (PLUTONIC) — TAI PO GRANODIORITE	Average depth to Zone C is approximately 15 m but can be over 40 m. Boulders and corestones are common in weathered zones. Weathering product is subangular silty sand.	Comments as for granites but a little more care required with weathered materials because they are likely to be slightly more clayey. Special care must be taken in establishing adequate surface protection on newly formed slopes.	Because of the low to moderate content of quartz in the clay, weathered zone could be used for making bricks. Weathered zone material may be used for fill. Fresh rock is suitable for aggregate. Lower quartz content makes this material suitable for asphaltic concrete. Core stones may be present.
SEDIMENTARY, VOLCANICLASTIC AND EXTRUSIVE IGNEOUS ROCKS — REPULSE BAY FORMATION — SEDIMENTS OF WATER LAID VOLCANICLASTICS	Shallow to moderately deep, reddish to brown, fine, sandy to silty clay, i.e. residual soil sometimes with ferruginous gravel and weathered rock fragments, overlying completely to highly weathered rock which grades into less weathered strongly jointed volcanic rock at depths from 5 - 20 m.	The limited extent of these rock types make it unlikely they will be encountered to any significant degree. The sediments are bedded and fissile and weather relatively rapidly to a grey silt when exposed. Some stability problems may arise even at low angles. Groundwater regime may be controlled by bedding characteristics of this rock.	Can be scraped and ripped when weathered. Fresh rock will need pneumatic machines or blasting. Due to highly variable properties and presence of chert bands this material would not make a good source of aggregate, but is well suited for filling.
SEDIMENTARY, VOLCANICLASTIC AND EXTRUSIVE IGNEOUS ROCKS — REPULSE BAY FORMATION — COARSE TUFF; AGGLOMERATE; PREDOMINANTLY PYROCLASTICS	Rock usually produces a thin (< 1 m) soil horizon, followed downwards especially on lower slopes by yellowish brown sandy material overlying less weathered, locally strongly jointed rock below an average depth of 11 m. On steep high slopes soil cover and weathering may be very thin with slightly weathered to fresh rock occuring in outcrop.	Stability of weathered material and also of highly jointed rockmasses may be suspect, especially during or immediately after prolonged heavy rainfall. Failures are common in over steepened areas. Rapid surface runoff is common. The stability of rock slopes is controlled by discontinuity orientations and surface properties in the fresh, slightly or moderately weathered state. Stability of rock slopes controlled by relatively close spaced discontinuities in moderately weathered to fresh rock mass. - Few opportunities for creation of platforms; usable sites may be small and fragmented. - Access route selection hampered by terrain. - Tunnelling probably easier than in granitoids. Deep weathering and close jointing should be anticipated near structural geological lineaments.	Material can be used for fill if it is weathered locally. It is possible to quarry, although very hard and produces elongate fragments when crushed. Coarse tuff may provide useful aggregate.
SEDIMENTARY ROCKS — TAI O FORMATION	Generally moderately deep (5-10 m) uniform or gradational, red to red-brown residual clayey soil, overlying completely to highly weathered sediments.	Fresh material is generally stable and has good bearing capacity characteristics. Weathered material subject to creep and some instability, especially when saturated.	Restricted outcrop precludes extensive usage. Weathered horizon can be excavated by machine, fresh rock needs pneumatic tools or blasting. Possible use as borrow.
METAMORPHOSED SEDIMENTARY AND VOLCANIC ROCKS — LOK MA CHAU FORMATION	Generally moderately deep (1-2 m), uniform or gradational, red to red-brown, residual clayey soil, overlying completely to highly weathered metasediments.		Weathered horizon can be excavated by machine, fresh rock needs pneumatic tools or blasting. Possible use as borrow but fresh rock not suitable for aggregate.

Abbreviations

c'	- effective cohesion - kPa - kilopascal	SI	- Site Investigation
φ'	- effective angle of internal friction - ° - degree	UCS	- Unconfined Compressive Strength
Cu	- undrained shear strength - kPa - kilopascal	Is(50)	- point load strength index - MPa - megapascal
OMC	- optimum moisture content - kg/m³ - kilogram per cubic metre	LL	- liquid limit - % - percent
MDD	- maximum dry density - kg/m³ - kilogram per cubic metre	PL	- plastic limit - % - percent
DD	- dry density - kg/m³ - kilogram per cubic metre	MC	- moisture content - % - percent
CBR	- California Bearing Ratio - % - percent	SPT	- standard penetration test value
		m/s	- metres per second
		≈	- about equal to

Title:	ENGINEERING GEOLOGY MAP – WEST NEW TERRITORIES
Compiled: J. M. Nash	Drawn: S. M. Wan
Scale: 1 : 20 000	Date: April , 1984
Map Ref. No.: EG / 20 / GAS 15 / 2	Sheet:

Engineering Geology Map. EGM





Map Unit	Weathering and Soil Development	Engineering Comment (Stability, Foundation, Hydrogeology)	Material Uses and Excavation Characteristics
RECLAMATION/FILL	These materials placed by man have no soil or weathering profile but may contain weathered rocks or be underlain by natural superficial deposits and/or a pre-existing weathered profile.	Few problems if properly compacted. Old fill slopes may be poorly compacted and subject to failure. Steep excavations require support. High groundwater requires special drainage. Low bearing pressures can be accepted directly, high loads need raft, spread or piled foundations. Settlement problems minor except in sanitary fill, which may have associated leachate and gas problems.	These areas when properly formed provide platforms with high development potential. Care should be taken in excavation of sanitary landfill when biodegradation is incomplete.
LITTORAL DEPOSITS (W)	Nil	Too restricted in size and distribution to be of significance.	Main development potential is as beaches for recreational purposes. Excavation of these materials usually prohibited.
ALLUVIAL DEPOSITS	In subaerial locations very minor development of soil (pedogenic) horizon. Relict deposits may be more weathered.	Materials are usually saturated and of a low density - clay layers are normally consolidated. Buried channels may pose local problems of high water flows into tunnels or excavations. Steep excavations require support.	Land deposits easily excavated. Marine deposits often form reasonable hydraulic fill. Excavation by cutter, suction or bucket dredger.
MARINE SEDIMENTS	Nil	Material is poor to unsatisfactory for hydraulic fill. It is also poor as a foundation because of settlement and bearing capacity problems. Will probably be susceptible to mud wave if fill is end tipped onto it. Consolidation may be aided by wick drains and/or surcharge loading.	Easily excavated using bucket or possibly suction dredger where necessary. Sandy deposits may be used in construction but silt and clay may pose problems of disposal.
COLLUVIAL: VOLCANIC DERIVED; GRANITIC DERIVED; MIXED	Colluvium can occur as independent deposit of a unique age such that one deposit overlies another. The older deposits may be subject to severe weathering and may be completely decomposed to a mottled coloured sandy silt or clayey silt similar to the insitu residual deposits of their parent materials. The depth of such weathering may be in the order of 10 m or more.	Material that has moved in its geologic past and is prone to reactivation if not carefully treated by use of such measures as low batter angles, drainage, and surface protection, especially when saturated. Has low to moderate bearing capacity characteristics but should always be carefully drained because it may be susceptible to failure when wet. Voids may cause settlement of roads, services and buildings. Tunnelling probably difficult. Si difficult and expensive.	May be used for borrow due to its ease of excavation by machine, broad grading characteristics and relative ease of access on hillsides. Some stream fill boulder deposits will be of limited use. Large boulders may require blasting or splitting.
INTRUSIVE IGNEOUS ROCKS — DYKE ROCKS: DOLERITE (D)	Weathers deeply to a dark red silty clay.	Restricted extent precludes detailed comment. Weathered mantle will have low relative permeability and will affect near-surface groundwater hydrology by forming barriers divides and boundary conditions. Sub-vertical dykes may dam groundwater leading to unnaturally high groundwater levels.	Restricted extent precludes deliberate borrow or quarry activities - weathered material would make poor fill but fresh rock would make suitable high density aggregate or railway ballast.
INTRUSIVE IGNEOUS ROCKS (PLUTONIC) — UNDIFFERENTIATED GRANITIC ROCK	Generally deep weathered rock in the order of 20 m thick. Upper weathered zone porous and permeable.	Engineering characteristics as outlined for other granitic rock.	Excavation and material uses as for other granite rocks.
GRANOPHYRIC MICROGRANITE	Weathers to produce a clayey silty sand with corestones. Depth of weathering similar to other granites. Fresh rock outcrops in stream beds on occasions.	As for all Hong Kong rock types weathered material may be unstable if undercut. Joints control stability in any rock cutting.	Weathered material can be machine excavated for use as fill. Limited outcrop and urban proximity restricts borrow potential to local site preparation. Fresh rock will require blasting.
MEDIUM HILL GRANITE — FINE GRAINED PORPHYRITIC PHASE (NHm); MEDIUM GRAINED PORPHYRITIC PHASE	Shallow to deep residual soils over deeply weathered granite. Local occurrence of less weathered rock outcrop and/or massive boulders on upper slopes and incised gully floors.	Unstable areas result from deep weathering and joint controlled rock affects the weathered mantle slopes. Extensive rill and sheet erosion. Bearing capacity characteristics are generally favourable for moderate to high loads. Materials are generally free draining.	Used as a source of borrow and aggregate, the former requiring machine excavation and the latter blasting.
INTRUSIVE IGNEOUS ROCKS — DYKE ROCKS AND VEINS: QUARTZ VEIN (q); QUARTZ VEIN WITH MOLYBDENITE (mo); QUARTZ VEIN WITH PYRITE (Py)	Quartz veins undergo only mechanical disintegration as they are very resistant to decomposition. Coarse angular gravel is the product.	Generally too small to effect structure but contained sulphides may affect groundwater chemistry and react with concrete and steel in foundations.	Restricted extent precludes deliberate borrow activity for these rocks. Weathering results in mechanical break up only of quartz and a decomposition of sulphides. Fresh rock not suitable for aggregate due to potential sulphide reaction with cement. Molybdenite has been commercially mined.
DEEPLY WEATHERED PEGMATITE WITH KAOLINITE (ka)	Deep to very deep weathering with kaolinite development.	May form a local deepening of weathered profile.	

INTRUSIVE IGNEOUS ROCKS (PLUTONIC) — SEDIMENTARY, VOLCANICLASTIC AND EXTRUSIVE IGNEOUS ROCKS — METAMORPHOSED SEDIMENTARY AND VOLCANIC ROCKS

REPULSE BAY FORMATION

F dots)

es)

W TERRITORIES

G H

Engineering Geology Map EGM



LEGEND

- Strike and dip of beds
- Strike and dip of schistosity
- Strike of bedding - dip unknown
- Vertical bedding
- GCO Rock Collection sample point
- Geological cross-section line (A — B)
- GAS boundary
- Catchment boundary (order indicated by number of dots)
- Geological boundary (solid)
- Geological boundary (superficial)
- Trace of dyke & vein
- Photogeological lineament (approximate)
- Faults
- Thrust (teeth pointing to upper plate)
- Isopachs of submarine superficial deposits (metres)
- Depth in fathoms
- General instability

Map Unit	
RECLAMATION/FILL	
LITTORAL DEPOSITS w	
ALLUVIAL DEPOSITS	
MARINE SEDIMENTS	
COLLUVIUM: VOLCANIC DERIVED	
COLLUVIUM: GRANITIC DERIVED	
COLLUVIUM: MIXED	
INTRUSIVE IGNEOUS ROCKS: DYKE ROCKS: DOLERITE D	
INTRUSIVE IGNEOUS ROCKS (PLUTONIC): UNDIFFERENTIATED GRANITIC ROCK	
GRANOPHYRIC - MICROGRANITE	
INTRUSIVE IGNEOUS ROCKS (PLUTONIC): KESTREL HILL GRANITE: FINE GRAINED PORPHYRITIC PHASE	
NHm MEDIUM GRAINED PORPHYRITIC PHASE	
INTRUSIVE IGNEOUS ROCKS: DYKE ROCKS AND VEINS: QUARTZ VEIN q	
QUARTZ VEIN WITH MOLYBDENITE mo	
QUARTZ VEIN WITH PYRITE Py	
DEEPLY WEATHERED PEGMATITE WITH KAOLINITE ka	

AREA STUDY

P - WEST NEW TEI

F | G

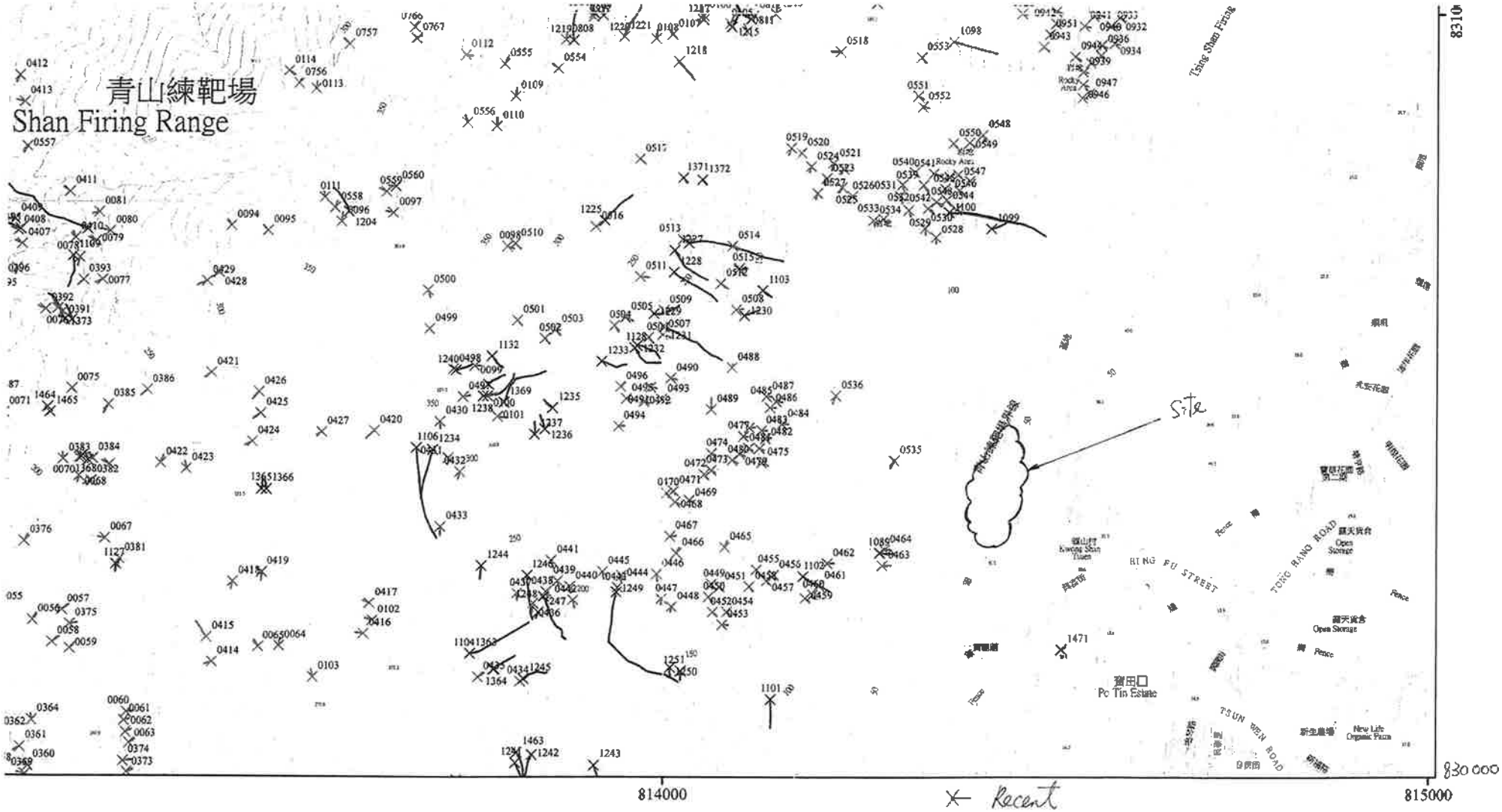
Engineering Geology Map EGM

Engineering Geology Map.
EGM



APPENDIX E

LANDSLIDE RECORDS



Map Sheet 05NED

ENTLI_NO	Group	Year	Prev. Year	Width	Source Gradient (Deg)	Cover	Crown Elevation (mPD)	Toe Elevation (mPD)	Elevation Difference (m)	Gully
05NED1079E	Relict	1963	-	1.00	32.50	C	226.00	221.00	5.00	Y
05NED1080E	Relict	1963	-	1.00	48.00	C	253.00	246.00	7.00	Y
05NED1081E	Relict	1963	-	1.00	50.50	C	238.00	228.00	10.00	Y
05NED1082E	Recent	1963	1954	1.00	35.00	A	200.00	191.00	9.00	N
05NED1083E	Recent	1963	1956	1.00	53.50	A	43.00	38.00	5.00	Y
05NED1084E	Recent	1963	1956	1.00	40.50	A	132.00	126.00	6.00	N
05NED1085E	Recent	1963	1956	1.00	37.50	A	57.00	40.00	17.00	N
05NED1086E	Recent	1963	1954	1.00	45.00	A	275.00	267.00	8.00	N
05NED1087E	Recent	1963	1954	1.00	38.50	A	279.00	272.00	7.00	N
05NED1088E	Recent	1963	1956	1.00	48.00	A	146.00	141.00	5.00	N
05NED1089E	Recent	1973	1964	1.00	24.00	A	71.00	60.00	11.00	N
05NED1090E	Recent	1974	1973	1.00	62.50	A	274.00	252.00	22.00	Y
05NED1091E	Recent	1974	1973	1.00	51.00	A	306.00	288.00	18.00	N
05NED1092E	Recent	1987	1986	1.00	41.00	A	98.00	83.00	15.00	N
05NED1093E	Recent	1989	1988	1.00	39.50	A	122.00	114.00	8.00	N
05NED1094E	Recent	1989	1988	1.00	37.50	A	134.00	106.00	28.00	N
05NED1095E	Recent	1989	1988	1.00	24.00	A	136.00	126.00	10.00	N
05NED1096E	Recent	1989	1988	1.00	35.50	A	251.00	233.00	18.00	N
05NED1097E	Recent	1989	1988	1.00	40.50	A	252.00	188.00	64.00	N
05NED1098E	Recent	1989	1988	1.00	44.00	A	226.00	189.00	37.00	N
05NED1099E	Recent	1989	1988	1.00	37.50	A	108.00	96.00	12.00	N
05NED1100E	Recent	1989	1988	1.00	35.50	A	142.00	77.00	65.00	N
05NED1101E	Recent	1989	1988	1.00	32.50	A	101.00	79.00	22.00	N
05NED1102E	Recent	1989	1988	1.00	40.50	A	127.00	99.00	28.00	N
05NED1103E	Recent	1989	1988	1.00	35.50	A	143.00	133.00	10.00	N
05NED1104E	Recent	1989	1988	1.00	31.50	A	236.00	179.00	57.00	N
05NED1105E	Recent	1989	1988	1.00	27.00	A	221.00	201.00	20.00	N
05NED1106E	Recent	1989	1988	1.00	22.00	A	299.00	233.00	66.00	N
05NED1107E	Recent	1989	1988	1.00	29.00	A	194.00	165.00	29.00	N
05NED1108E	Recent	1989	1988	1.00	39.50	A	172.00	137.00	35.00	N
05NED1109E	Recent	1989	1988	1.00	22.00	A	246.00	217.00	29.00	N
05NED1110E	Recent	1989	1988	1.00	24.00	A	213.00	206.00	7.00	Y
05NED1111E	Recent	1989	1988	1.00	28.50	A	260.00	245.00	15.00	N
05NED1112E	Recent	1989	1988	1.00	32.50	A	218.00	154.00	64.00	N
05NED1113E	Recent	1989	1988	1.00	40.50	A	220.00	185.00	35.00	N
05NED1114E	Recent	1989	1988	1.00	37.00	A	224.00	205.00	19.00	N
05NED1115E	Recent	1989	1988	1.00	48.00	A	215.00	179.00	36.00	N
05NED1116E	Recent	1989	1988	1.00	38.00	A	184.00	161.00	23.00	N
05NED1117E	Recent	1989	1988	1.00	20.00	A	35.00	29.00	6.00	Y
05NED1118E	Recent	1989	1988	1.00	39.50	A	49.00	43.00	6.00	Y
05NED1119E	Recent	1989	1988	1.00	40.50	A	148.00	135.00	13.00	N
05NED1120E	Recent	1989	1988	1.00	37.00	A	67.00	34.00	33.00	N
05NED1121E	Recent	1989	1988	1.00	35.50	A	62.00	50.00	12.00	Y
05NED1122E	Recent	1989	1988	1.00	44.00	A	97.00	82.00	15.00	N
05NED1123E	Recent	1989	1988	1.00	42.00	A	69.00	61.00	8.00	N
05NED1124E	Recent	1989	1988	1.00	32.50	A	67.00	30.00	37.00	Y
05NED1125E	Recent	1990	1989	1.00	32.50	A	53.00	41.00	12.00	N
05NED1126E	Recent	1990	1989	1.00	28.50	A	77.00	71.00	6.00	N

ENTLI_NO	Group	Year	Prev. Year	Width	Source Gradient (Deg)	Cover	Crown Elevation (mPD)	Toe Elevation (mPD)	Elevation Difference (m)	Gully
05NED0455E	Relict	1963	-	1.00	38.00	C	164.00	156.00	8.00	N
05NED0456E	Relict	1963	-	1.00	52.00	C	148.00	142.00	6.00	N
05NED0457E	Relict	1963	-	1.00	45.00	C	145.00	140.00	5.00	N
05NED0458E	Relict	1963	-	1.00	40.50	C	153.00	144.00	9.00	N
05NED0459E	Relict	1963	-	1.00	47.50	C	113.00	107.00	6.00	N
05NED0460E	Relict	1963	-	1.00	38.00	C	112.00	107.00	5.00	N
05NED0461E	Relict	1963	-	1.00	39.00	C	112.00	105.00	7.00	N
05NED0462E	Relict	1963	-	1.00	43.50	C	106.00	101.00	5.00	N
05NED0463E	Relict	1963	-	1.00	29.00	C	69.00	63.00	6.00	N
05NED0464E	Relict	1963	-	1.00	36.00	C	68.00	62.00	6.00	N
05NED0465E	Relict	1963	-	1.00	38.50	C	191.00	184.00	7.00	N
05NED0466E	Relict	1963	-	1.00	39.00	C	220.00	215.00	5.00	N
05NED0467E	Relict	1963	-	1.00	36.00	C	217.00	211.00	6.00	N
05NED0468E	Relict	1963	-	1.00	38.00	C	215.00	209.00	6.00	N
05NED0469E	Relict	1963	-	1.00	55.00	C	203.00	197.00	6.00	N
05NED0470E	Relict	1963	-	1.00	40.50	C	229.00	224.00	5.00	N
05NED0471E	Relict	1963	-	1.00	56.50	C	229.00	221.00	8.00	N
05NED0472E	Relict	1963	-	1.00	45.00	C	203.00	196.00	7.00	N
05NED0473E	Relict	1963	-	1.00	47.00	C	200.00	192.00	8.00	N
05NED0474E	Relict	1963	-	1.00	31.50	C	203.00	195.00	8.00	N
05NED0475E	Relict	1963	-	1.00	33.00	C	145.00	136.00	9.00	N
05NED0476E	Relict	1963	-	1.00	41.00	C	165.00	155.00	10.00	N
05NED0477E	Relict	1963	-	1.00	50.50	C	172.00	165.00	7.00	N
05NED0478E	Relict	1963	-	1.00	39.50	C	164.00	158.00	6.00	N
05NED0479E	Relict	1963	-	1.00	36.00	C	172.00	163.00	9.00	N
05NED0480E	Relict	1963	-	1.00	40.50	C	177.00	169.00	8.00	N
05NED0481E	Relict	1963	-	1.00	47.00	C	153.00	147.00	6.00	N
05NED0482E	Relict	1963	-	1.00	50.00	C	146.00	138.00	8.00	N
05NED0483E	Relict	1963	-	1.00	37.50	C	150.00	143.00	7.00	N
05NED0484E	Relict	1963	-	1.00	45.00	C	126.00	120.00	6.00	N
05NED0485E	Relict	1963	-	1.00	45.00	C	130.00	123.00	7.00	N
05NED0486E	Relict	1963	-	1.00	37.00	C	137.00	130.00	7.00	N
05NED0487E	Relict	1963	-	1.00	45.50	C	140.00	134.00	6.00	N
05NED0488E	Relict	1963	-	1.00	50.00	C	148.00	144.00	4.00	N
05NED0489E	Relict	1963	-	1.00	39.50	C	185.00	174.00	11.00	N
05NED0490E	Relict	1963	-	1.00	38.50	C	184.00	177.00	7.00	N
05NED0491E	Relict	1963	-	1.00	54.50	C	207.00	197.00	10.00	N
05NED0492E	Relict	1963	-	1.00	45.00	C	216.00	208.00	8.00	N
05NED0493E	Relict	1963	-	1.00	50.50	C	193.00	187.00	6.00	N
05NED0494E	Relict	1963	-	1.00	44.00	C	245.00	237.00	8.00	N
05NED0495E	Relict	1963	-	1.00	42.50	C	233.00	226.00	7.00	N
05NED0496E	Relict	1963	-	1.00	36.00	C	233.00	229.00	4.00	N
05NED0497E	Relict	1963	-	1.00	39.50	C	327.00	318.00	9.00	N
05NED0498E	Relict	1963	-	1.00	43.50	C	323.00	316.00	7.00	N
05NED0499E	Relict	1963	-	1.00	49.50	C	339.00	332.00	7.00	N
05NED0500E	Relict	1963	-	1.00	48.00	C	368.00	357.00	11.00	N
05NED0501E	Relict	1963	-	1.00	36.50	C	299.00	292.00	7.00	N
05NED0502E	Relict	1963	-	1.00	50.00	C	276.00	269.00	7.00	N

APPENDIX F

RELEVENT GEOTECHNICAL STUDIES

GEO

RID No. 46846

2 0 APR 2010

STAGE 2 STUDY REPORT

S2R 49/2006

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
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FEATURE NO. 5NE-D/C2
DD132 LOT1744I, DD132 LOT1744H, DD132LOT1744F, DD132LOT1744A, DD132LOT1744C & DD132LOT1744B
150M WEST OF KWONG SHAN TSUEN, TUEN MUN

SCOTT WILSON LIMITED

March 2010
Slope Safety Division, GEO

1. INTRODUCTION

1.1 Background

This report presents the findings of a safety screening study carried out on a lot-by-lot basis for feature No. **5NE-D/C2** located 250m Northwest of Horizon East Primary School, Tuen Mun. The study feature lies partly within DD132 Lot1744I, DD132 Lot1744H, DD132 Lot1744F, DD132 Lot1744A, DD132 Lot1744C, DD132 Lot1744B and partly within Government Land.

The study status and locations of the feature, in Hong Kong Metric Grid Co-ordinates, are listed as follows:

Feature No.	Included in this Safety Screening Study	Hong Kong Metric Grid Co-ordinates
5NE-D/C2	Yes	814425E 830372N
5NE-D/F1	No	814457E 830362N

The location of the study feature with respect to DD132 Lot1744I, DD132 Lot1744H, DD132 Lot1744F, DD132 Lot1744A, DD132 Lot1744C and DD132 Lot1744B is shown on the Location Plan (Figure 1). The boundary of the feature has been determined from the boundary survey carried out by Helen Chan Professional Land Survey Ltd in November 2005. The boundary survey is enclosed in Appendix A.

The Stage 2 Study commenced in July 2004. The scope of the study includes desk study, site inspection, aerial photograph interpretation, sectional survey and stability analysis. No ground investigation work was undertaken for the study.

1.2 Site Description

The study feature is located 150m west of Kwong Shan Tsuen, Tuen Mun. A Location Plan of the feature is presented in Figure 1 and a Feature Plan is presented in Figure 2.

Feature No. **5NE-D/C2** is an east-facing cut slope approximately 105m in length and 10.7m in height. The slope face is inclined at angles between 35° and 40°. The study feature is partly covered with chunam and partly covered with vegetation. Three abandoned houses are located at the toe of the feature. Natural hillside extends above the crest of the feature and is inclined at an angle of about 25°.

1.3 Maintenance Responsibility

The maintenance responsibility for the study feature, according to the relevant SIMAR report, is listed as follows:

Feature No.	Sub-Division No. stated in SIMAR Report	Maintenance Responsibility
5NE-D/C2	1	Civil Engineering and Development Department
	2	DD132 Lot1744I
	3	DD132 Lot1744H
	4	DD132 Lot1744F
	5	DD132 Lot1744B
	6	DD132 Lot1744C
	7	DD132 Lot1744A

A copy of the full SIMAR Reports on the land status and maintenance responsibilities for the study features is presented in Appendix B.

2. GEOTECHNICAL INVESTIGATION

2.1 Background/Desk Study

2.1.1 Aerial Photograph Interpretation

Aerial Photograph Interpretation (API) was carried out to investigate the history of the feature. Aerial photographs between 1963 and 2003 were viewed. The photographs indicate that the feature No. **5NE-D/C2** was formed between 1963 and 1964, likely in association with the construction of houses at the slope toe. No evidence of any fill, boulders or natural drainage channels was observed in the vicinity of the study feature.

Details of the API report are presented in Appendix C.

2.1.2 Geotechnical Engineering Office (GEO)

A search of the files in the Geotechnical Information Unit (GIU) of GEO revealed a Phase 2 Systematic Inspection of Features (SIFT) Study Report for the feature prepared by the GEO in 1994. The report indicates that two landslips were evident in the aerial photographs of 1993.

The Feature Registration Form and Stage 1 Study Report on the study feature were obtained from the Slope Information System. The forms and report indicate that the feature displayed minor distress including minor slip scar at the slope crest. Chunam cracking and no sign of seepage were noted at the time of the GEO's inspection in February 1997.

Copies of the data retrieved from the above studies on the feature are presented in Appendix D.

In 2008, site specific ground investigation works including three drillholes BH1, BH2, BH3 and five trial pits TP2, TP3, TP3A, TP4, TP5 and three surface strippings CS1, CS2 and CS3 located on the feature were carried out by Gammon Construction Limited. Piezometers were installed in each of these drillholes and monitored for a seven-day period between July and August 2008. The locations of the ground investigation are shown in Figure 2.

Laboratory tests were undertaken in association with the above GI works by Gammon Construction Limited in 2008. The laboratory testing included several multi-stage triaxial tests on soil samples of CDT and landslip debris retrieved from the drillholes and trial pits (Refer to Section 3.4).

Part prints of the GI report and a summary of the laboratory test result on the feature are enclosed in Appendix D1.

2.1.3 Buildings Department (BD)

Correspondence between the GEO and the BD dated 15 December 2005 indicates that there are no records of approved building works relevant to DD132 Lot1744I, DD132 Lot1744H, DD132 Lot1744F, DD132 Lot1744A, DD132 Lot1744C and DD132 Lot1744B. Copies of the correspondence are enclosed in Appendix E.

2.1.4 Utilities Information

The following government departments have been consulted for details of their installations in the vicinity of the study feature:

- Water Supplies Department (WSD),
- Drainage Services Department (DSD).

Records received from WSD and DSD indicate that there are no services in the vicinity of the study feature. Correspondence from DSD and WSD are enclosed in Appendix F.

2.1.5 Geological Survey

The Hong Kong Geological Survey Map, Sheet 5 (scale 1:20,000) Solid and Superficial Geology of Tsing Shan (Castle Peak) published by the Geotechnical Control Office (GCO, 1986) indicates that the study feature is underlain by metamorphosed volcanics of the Tuen Mun Formation comprising andesite with tuff and tuffite. Debris flow deposits are also indicated immediately to the southeast of the study feature.

As revealed in the ground investigation works carried out by Gammon Construction Limited in 2008, the local geology of the feature generally comprises a layer of colluvium with thickness varying from 1.0m to 1.5m overlying completely decomposed tuffite (CDT) and then moderately decomposed tuffite (MDT). Landslip debris with thickness varying from 0.3m to 1.7m was identified near the slope toe of the study feature.

Copies of the relevant sections of the geological map are enclosed in Appendix G.

2.1.6 Past Instability

A search of available records at the GEO indicates no recorded cases of past instability for the study feature. The Slope Information System at the GEO indicates that minor distress has previously been recorded on the study feature. During the site inspection, two landslide scars of 12m width by 0.5m height and 1.5m width by 1m height were observed near the crest of the study feature.

2.2 Visual Inspection

Scott Wilson carried out a site inspection in November 2008 to assess the condition of the study feature. Observations made during the site inspection are shown on the Feature Plan (Figure 2).

Feature No. **5NE-D/C2** is an east-facing cut slope approximately 105m in length and 10.7m in height. The slope face is inclined at angles between 35° and 40°. The study feature is covered with vegetation. Three abandoned houses are located at the toe of the feature. Natural hillside extends above the crest of the feature and is inclined at an angle of about 25°.

Two minor erosion scars with on-slope area of 12m width by 0.5m height and 1.5m width by 1m height are present at the upper northern portion and the upper central portion of the feature, respectively. The depth of the scars is only about 0.5m.

No sign of seepage was observed during the site inspection. Based on examination of soil exposures, the feature is made up of completely decomposed tuff (CDT). This material could be crumbled by hand and a shallow indentation could be made when a firm blow is applied by the point of a geological hammer. It can be described as a medium dense, fine to medium grained silty sand.

Photographs taken during the site inspection are shown in Plates 1 to 5.

3. GEOTECHNICAL ASSESSMENT

3.1 Topography

The study feature is located partly within DD132 Lot1744I, DD132 Lot1744H, DD132 Lot1744F, DD132 Lot1744A, DD132 Lot1744C, DD132 Lot1744B and partly within Government Land, as indicated in Figure 1. Helen Chan Professional Land Survey Ltd carried out sectional survey of Sections 1-1 to 3-3 (Appendix A) for stability analysis of the feature. The section locations were determined based on the feature height, gradient, maintenance responsibility and consequence of failure.

3.2 Geology and Geological Model

As discussed in Section 2.1.5 of this report, the local geology of the feature generally comprises a layer of colluvium overlying completely decomposed tuffite (CDT)

and then moderately decomposed tuffite (MDT). Landslip debris was identified near the slope toe of the feature. The thickness of colluvium identified in the three drillholes varies from 1.0m to 1.5m. It is generally described as firm to stiff sandy silt with fine gravel sized rock fragments. The underlying completely decomposed tuffite is described as stiff to very stiff, sandy silt. All the trial pits and slope stripping (CS3) revealed that landslip debris with thickness varying from 0.3m to 1.7m present near the slope toe of the feature. It is generally described as loose to stiff, sandy silt with fine to coarse gravel sized rock fragments.

3.3 Groundwater Conditions

No sign of seepage was observed during the site inspection by Scott Wilson in Nov 2008. The SIS records also indicate that no signs of seepage were observed during a previous site inspection by the GEO in February 1997. Piezometers with Halcrow buckets installed in drillholes BH1 to BH3 located at the crest of the study feature were measured to be dry during the seven-day monitoring periods between July and August 2008. The piezometers with Halcrow buckets were subsequently replaced by automatic piezometers in December 2008 and monitored until mid April 2009. All the automatic piezometers were monitored to be dry during the period between December 2008 and mid April 2009. It is revealed that the groundwater table exists below the toe of the study feature. In view of the above information, it is considered to adopt the following groundwater condition in this study.

- Assumed 1m perch water table at the interface of colluvium/ CDT;
- Assumed ground water table at the piezometer tip level of 53.5mPD.

3.4 Parameters for Analysis

Laboratory testing on the samples for landslide debris and completely decomposed tuffite (CDT) recovered from drillholes and trial pits by Gammon Construction Limited include several multi-stage triaxial tests. Regression analysis of these results, considering only the results within the stress range applicable to the study feature, was carried out to determine shear strength parameters. The p'-q plots of the result are attached in Appendix H. For colluvium and highly/moderately decomposed tuffite (H/MDT), the soil parameters are assumed based on Table 8 of Geoguide 1. The soil strength parameters have been adopted for consideration of the actions to be recommended for the feature.

The parameters adopted for the slope forming materials are summarised in the table below:

Material Type	Cohesion c' (kPa)	Friction Angle ϕ' (deg)	Bulk Unit Weight γ (kN/m^3)
Landslide Debris	2	35	19
Colluvium	2	35	
CDT	3	36	
H/MDT	5	38	

3.5 Stability Analysis

Sections 1-1 to 3-3 have been identified as the critical sections for the study feature based on the feature height, gradient, maintenance responsibility and consequence-to-life identified during the desk study and site inspection.

Based on the judgment that the houses located close to the slope toe would be adversely affected should failure occur, this feature would fall into consequence-to-life Category '1' as indicated in Table 3 in Appendix A of Works Bureau Technical Circular No. 13/99 (with reference to TGN 15).

3.5.1 **Sub-division No. 1** of the Feature No. **5NE-D/C2** maintained by Civil Engineering and Development Department

Stability analysis of the critical section 2-2 was based on the inferred geological model, the various groundwater conditions and shear strength parameters as discussed in Sections 3.2 to 3.4. The results of stability analysis, as carried out following the Morgenstern-Price Rigorous Method using SLOPE/W Version 4.24 (BD Ref. No. G0119), are summarized in the table below:

Slip No.	Calculated Minimum Factors of Safety
S9 (Local Stability)	**0.972<1.2**
S5 (Overall Stability)	**1.122<1.2**

Details of stability analyses for the study are enclosed in Appendix I and the results on Section 2-2 are presented in Figure 4A.

3.5.2 **Sub-division No. 2** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744I

Stability analysis of the critical section 1-1 was based on the inferred geological model, the various groundwater conditions and shear strength parameters as discussed in Sections 3.2 to 3.4. The results of stability analysis, as carried out following the Morgenstern-Price Rigorous Method using SLOPE/W Version 4.24 (BD Ref. No. G0119), are summarized in the table below:

Slip No.	Calculated Minimum Factors of Safety
S2 (Local Stability)	2.714
S9 (Overall Stability)	1.225

Details of stability analysis for the study are enclosed in Appendix I and the results on Section 1-1 are presented in Figure 4A.

3.5.3 **Sub-division No. 3** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744H

Stability analysis of the critical section 2-2 was based on the inferred geological model, the various groundwater conditions and shear strength parameters, as discussed in Sections 3.2 to 3.4. The results of stability analysis, as carried out following the Morgenstern-Price Rigorous Method using SLOPE/W Version 4.24 (BD Ref. No. G0119), are summarized in the table below:

Slip No.	Calculated Minimum Factors of Safety
S2 (Local Stability)	1.901
S5 (Overall Stability)	**1.122<1.2**

Details of stability analysis for the study are enclosed in Appendix I and the results of stability analysis of Section 2-2 are presented in Figure 4B.

3.5.4 **Sub-division No. 4** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744F

Stability analysis of the critical Section 3-3 was based on the inferred geological model, the various groundwater conditions and shear strength parameters as discussed in Sections 3.2 to 3.4. The results of stability analysis, as carried out following the Morgenstern-Price Rigorous Method using SLOPE/W Version 4.24 (BD Ref. No. G0119), are summarized in the table below:

Slip No.	Calculated Minimum Factors of Safety
S2 (Local Stability)	1.512
S8 (Overall Stability)	**1.139<1.2**

Details of stability analysis for the study are enclosed in Appendix I and the results of stability analysis of Section 3-3 are presented in Figure 4C.

3.5.5 **Sub-division No. 5** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744B

Stability analysis of the critical Section 3-3 was based on the inferred geological model, the various groundwater conditions and shear strength parameters as discussed in Sections 3.2 to 3.4. The results of stability analysis, as carried out following the Morgenstern-Price Rigorous Method using SLOPE/W Version 4.24 (BD Ref. No. G0119), are summarized in the table below:

Slip No.	Calculated Minimum Factors of Safety
S1 (Local Stability)	2.033
S8 (Overall Stability)	**1.139<1.2**

Details of stability analysis for the study are enclosed in Appendix I and the results on Section 3-3 are presented in Figure 4C.

3.5.6 **Sub-division No. 6** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744C

Stability analysis of the critical Section 2-2 was based on the inferred geological model, the various groundwater conditions and shear strength parameters as discussed in Sections 3.2 to 3.4. The results of stability analysis, as carried out following the Morgenstern-Price Rigorous Method using SLOPE/W Version 4.24 (BD Ref. No. G0119), are summarized in the table below:

Slip No.	Calculated Minimum Factors of Safety
S1 (Local Stability)	2.911
S5 (Overall Stability)	**1.122<1.2**

Details of stability analysis for the study are enclosed in Appendix I and the results of stability analysis of Section 2-2 are presented in Figure 4B.

3.5.7 **Sub-division No. 7** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744A

Stability analysis of the critical Section 1-1 was based on the inferred geological model, the various groundwater conditions and shear strength parameters as discussed in Sections 3.2 to 3.4. The results of stability analysis, as carried out following the Morgenstern-Price Rigorous Method using SLOPE/W Version 4.24 (BD Ref. No. G0119), are summarized in the table below:

Slip No.	Calculated Minimum Factors of Safety
S1 (Local Stability)	2.087
S9 (Overall Stability)	1.225

Details of stability analysis for the study are enclosed in Appendix I and the results of stability analysis of Section 1-1 are presented in Figure 4A.

4. DISCUSSION OF CALCULATED FACTOR OF SAFETY

In accordance with Criterion F of GEO Circular No. 24, the recommended minimum FOS for slopes with significant consequence-to-life in the event of failure and without site specific GI should not be less than 1.2. For cases where the minimum FOS for slope lies between 1.1 and 1.2, engineering judgment shall be exercised to determine the need for service of a Dangerous Hillside (DH) Order.

4.1 Sub-division No. 1 of the Feature No. 5NE-D/C2 maintained by Civil Engineering and Development Department

Based on the slope geometry identified during the site inspection and the soil strength parameters obtained from the laboratory test and with reference to Table 8 of Geoguide 1, the results of the stability analyses of Section 2-2 for this sub-division indicate a minimum factor of safety of 0.972 for slip confining to the portion of slope within the government land under the assumed groundwater condition. The minimum factors of safety for slips involving the entire slope height under the assumed groundwater condition was 1.122.

4.2 Sub-division No. 2 of the Feature No. 5NE-D/C2 maintained by DD132 Lot1744I

Based on the slope geometry identified during the site inspection and the soil strength parameters obtained from the laboratory test and with reference to Table 8 of Geoguide 1, the results of stability analysis of Section 1-1 for this sub-division indicate a minimum factor of safety of 2.714 for a slip confining to the portion of slope within the private lot under the assumed groundwater condition. The minimum factors of safety for slips involving the entire slope height under the assumed groundwater condition was 1.225.

4.3 Sub-division No. 3 of the Feature No. 5NE-D/C2 maintained by DD132 Lot1744H

Based on the slope geometry identified during the site inspection and the soil strength parameters obtained from the laboratory test and with reference to Table 8 of Geoguide 1, the results of stability analysis of Section 2-2 for this sub-division indicate a minimum factor of safety of 1.901 for a slip confining to the portion of slope located within the private lot under the assumed groundwater condition. The minimum factors of safety for slips involving the entire slope height under the assumed groundwater condition was 1.122.

4.4 Sub-division No. 4 of the Feature No. 5NE-D/C2 maintained by DD132 Lot1744F

Based on the slope geometry identified during the site inspection and the soil strength parameters obtained from the laboratory test and with reference to Table 8 of Geoguide 1, the results of stability analysis of Section 3-3 for this sub-division indicate a minimum factor of safety of 1.512 for a slip confining to the portion of slope within the private lot under assumed groundwater condition. The minimum factors of safety for slips involving the entire slope height under assumed groundwater condition was 1.139.

4.5 **Sub-division No. 5** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744B

Based on the slope geometry identified during the site inspection and the soil strength parameters obtained from the laboratory test and with reference to Table 8 of Geoguide 1, the results of stability analyses of Section 3-3 for this sub-division indicate minimum factors of safety of 2.033 for a slip confining to the portion of slope maintained by the owners of DD132 Lot1744B under the assumed groundwater condition. The minimum factors of safety for slips involving the entire slope height under the assumed groundwater condition was 1.139.

4.6 **Sub-division No. 6** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744C

Based on the slope geometry identified during the site inspection and the soil strength parameters obtained from the laboratory test and with reference to Table 8 of Geoguide 1, the results of stability analyses of Section 2-2 for this sub-division indicate minimum factors of safety of 2.911 for a slip confining to the portion of slope maintained by the owners of DD132 Lot1744C under the assumed groundwater condition. The minimum factors of safety for slips involving the entire slope height under the assumed groundwater condition was 1.122.

4.7 **Sub-division No. 7** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744A

Based on the slope geometry identified during the site inspection and the soil strength parameters obtained from the laboratory test and with reference to Table 8 of Geoguide 1, the results of stability analyses of Section 1-1 for this sub-division indicate minimum factors of safety of 2.087 for a slip confining to the portion of slope maintained by the owners of DD132 Lot1744A under the assumed groundwater condition. The minimum factors of safety for slips involving the entire slope height under the assumed groundwater condition was 1.225.

5. CONCLUSIONS & RECOMMENDATIONS

5.1 **Sub-division No. 1** of the Feature No. **5NE-D/C2** maintained by Civil Engineering and Development Department

Sub-division No. 1 of the feature is under the maintenance responsibility of the Lands Department. It is recommended that in accordance with GEO Circular No. 30, follow-up action should be undertaken by the Government as appropriate.

The extent of the feature subject to follow-up action is coloured blue in Figure 5.

5.2 **Sub-division No. 2** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744I

Sub-division No. 2 of the feature, under the maintenance responsibility of DD132 Lot1744I, possesses factors of safety which do not satisfy the requirements for the service of a Dangerous Hillside (DH) Order in accordance with Criterion F of the GEO Circular 24. No further action is recommended for this sub-division.

5.3 **Sub-division No. 3** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744H

Sub-division No. 3 of the feature under the maintenance responsibility of DD132 Lot1744H, occupies the 1.0m height slope of the study feature. Upgrading works within the majority government portion would satisfy the overall stability of the feature. No further action is recommended for this sub-division.

5.4 **Sub-division No. 4** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744F

Sub-division No. 4 of the feature under the maintenance responsibility of DD132 Lot1744F, occupies the 1.30m height slope of the study feature. Upgrading works within the majority government portion would satisfy the overall stability of the feature. No further action is recommended for this sub-division.

5.5 **Sub-division No. 5** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744B

Sub-division No. 5 of the feature under the maintenance responsibility of DD132 Lot1744B, occupies the lower 2.0m height of the study feature. Upgrading works within the majority government portion would satisfy the overall stability of the feature. No further action is recommended for this sub-division.

5.6 **Sub-division No. 6** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744C

Sub-division No. 6 of the feature under the maintenance responsibility of DD132 Lot1744C, occupies the lower 1.0m height of the study feature. Upgrading works within the majority government portion would satisfy the overall stability of the feature. No further action is recommended for this sub-division.

5.7 **Sub-division No. 7** of the Feature No. **5NE-D/C2** maintained by DD132 Lot1744A

Sub-division No. 7 of the feature, under the maintenance responsibility of DD132 Lot1744A, possesses factors of safety which do not satisfy the requirements for the service of a Dangerous Hillside (DH) Order in accordance with Criterion F of the GEO Circular 24. No further action is recommended for this sub-division.

6. REFERENCES

6.1 References Identified in this Study

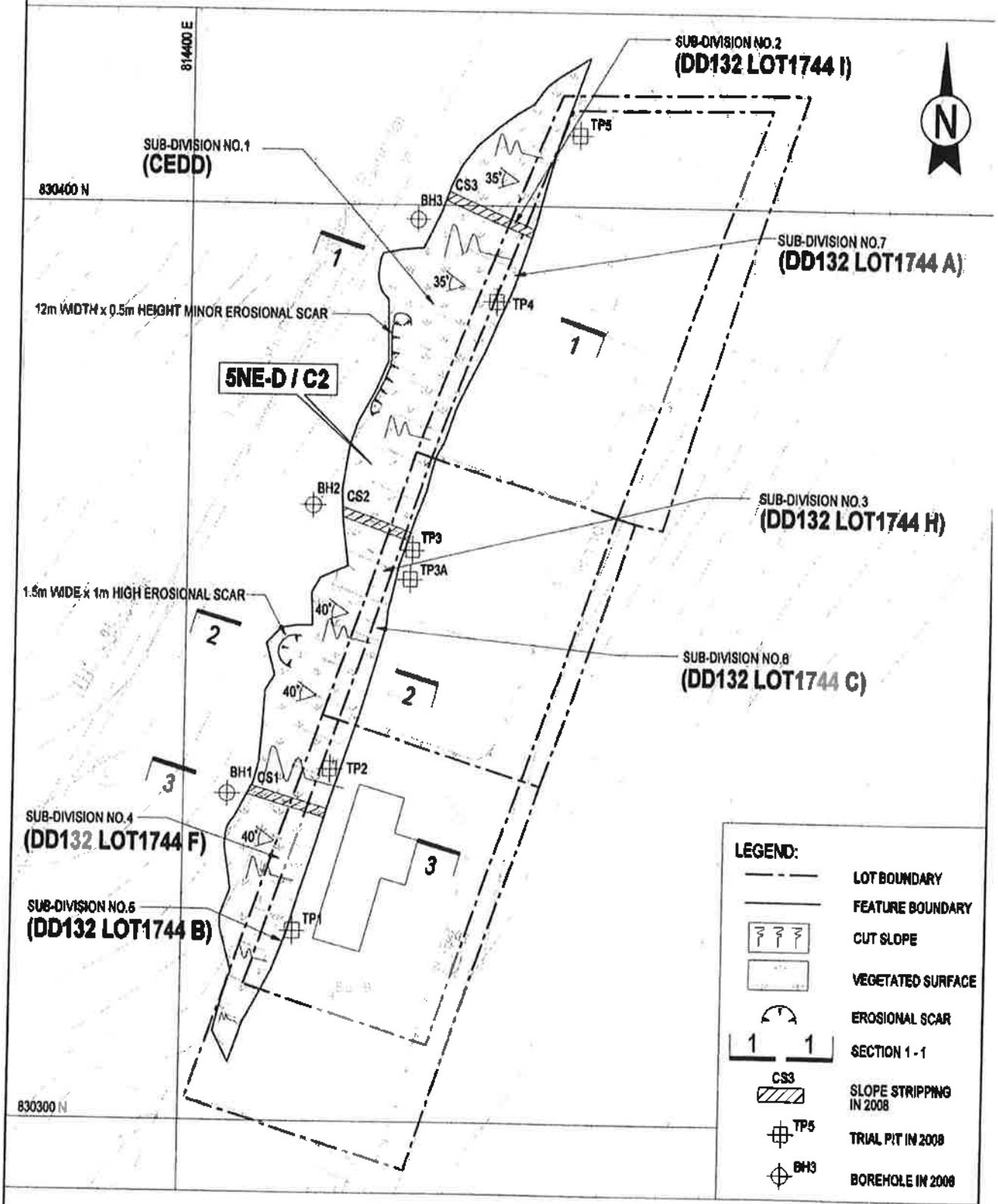
GEO (1994), Phase 2 SIFT Study Report for Feature No. 5NE-D/C2

GEO (1997), Feature Registration Form and Stage 1 study Report for Feature No. 5NE-D/C2

LOCATION: 150m WEST OF KWONG SHAN TSUEN, TUEN MUN

LOT NO(S). DD132 LOT1744 A, DD132 LOT1744 I, DD132 LOT1744 H, DD132 LOT1744 F, DD132 LOT1744 C, DD132 LOT1744 E

FEATURE NO(S). 5NE-D/C2



FEATURE SITE PLAN AND LOCATION OF GROUND INVESTIGATION

Civil Engineering and Development Department
Geotechnical Engineering Office

Survey sheet reference no.: 5NE-25D

Agreement No. CE10 / 2003 (GE)
10-year Extended LPM Project, Phase 4, Package F
Stability Studies of Private Slopes in Kowloon and Western New Territories -Investigation

Drawn:	ZHX	Checked:	SLCK
Scale:	1:600	Date:	Dec 08
Drg. No.:	Fig-02	Figure No.:	2

Scott Wilson Ltd
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LOCATION: 150m WEST OF KWONG SHAN TSUEN, TUEN MUN	LOT NO(S). DD132 LOT1744 A, DD132 LOT1744 I, DD132 LOT1744 H, DD132 LOT1744 F, DD132 LOT1744 C, DD132 LOT1744 B

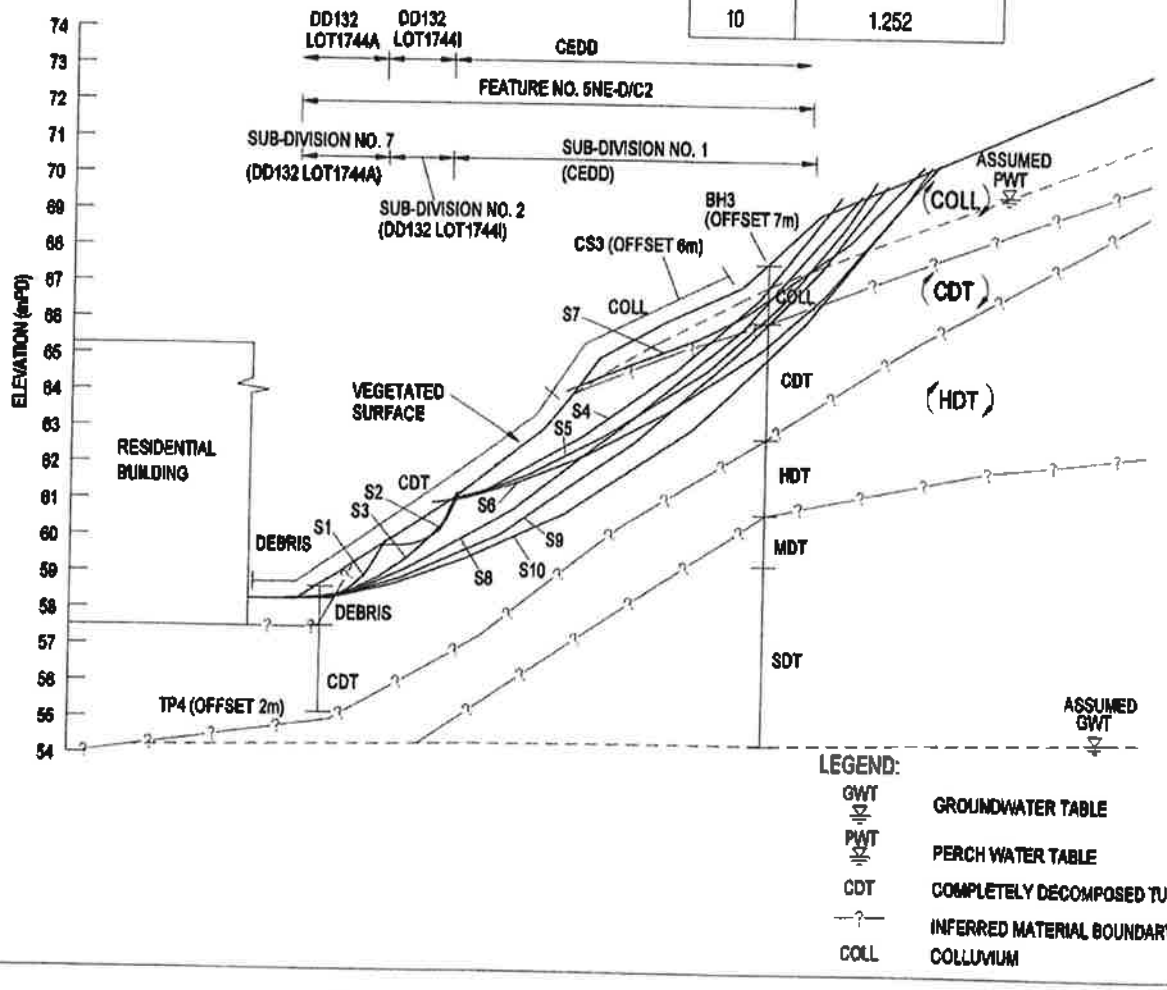
FEATURE NO(S). 5NE-D/C2

SOIL PARAMETER TABLE

MATERIAL TYPE	c'(kPa)	ø'(°)	γ (kN/m^3)
DEBRIS	2	35	19
COLLUVIUM	2	35	
CDT	3	36	
HDT	5	38	

THE RESULT OF STABILITY ANALYSIS

SLIP SURFACE	CALCULATED FACTOR OF SAFETY
1	2.087
2	2.714
3	1.791
4	1.265
5	1.246
6	1.276
7	1.278
8	1.239
9	1.225
10	1.252



LEGEND:

GWT	GROUNDWATER TABLE
PWT	PERCH WATER TABLE
CDT	COMPLETELY DECOMPOSED TUFF
—?—	INFERRED MATERIAL BOUNDARY
COLL	COLLUVIUM

GEOLOGICAL MODEL AND STABILITY ANALYSIS OF SECTION 1 - 1

CEDD Civil Engineering and Development Department Geotechnical Engineering Office	Agreement No. CE10 / 2003 (GE) 10-year Extended LPM Project, Phase 4, Package F, Stability Studies of Private Slopes in Kowloon and Western New Territories -Investigation	Drawn: XLS	Checked: SLCK
		Scale: 1:200	Date: Dec 08
		Drg. No.: Fig-04A	Figure No.: 4A
Survey sheet reference no.: -		Scott Wilson Ltd 偉信顧問集團有限公司	Scott Wilson 偉信

LOCATION: 150m WEST OF KWONG SHAN TSUEN, TUEN MUN	LOT NO(S). DD132 LOT1744 A, DD132 LOT1744 I, DD132 LOT1744 H, DD132 LOT1744 F, DD132 LOT1744 C, DD132 LOT1744 B

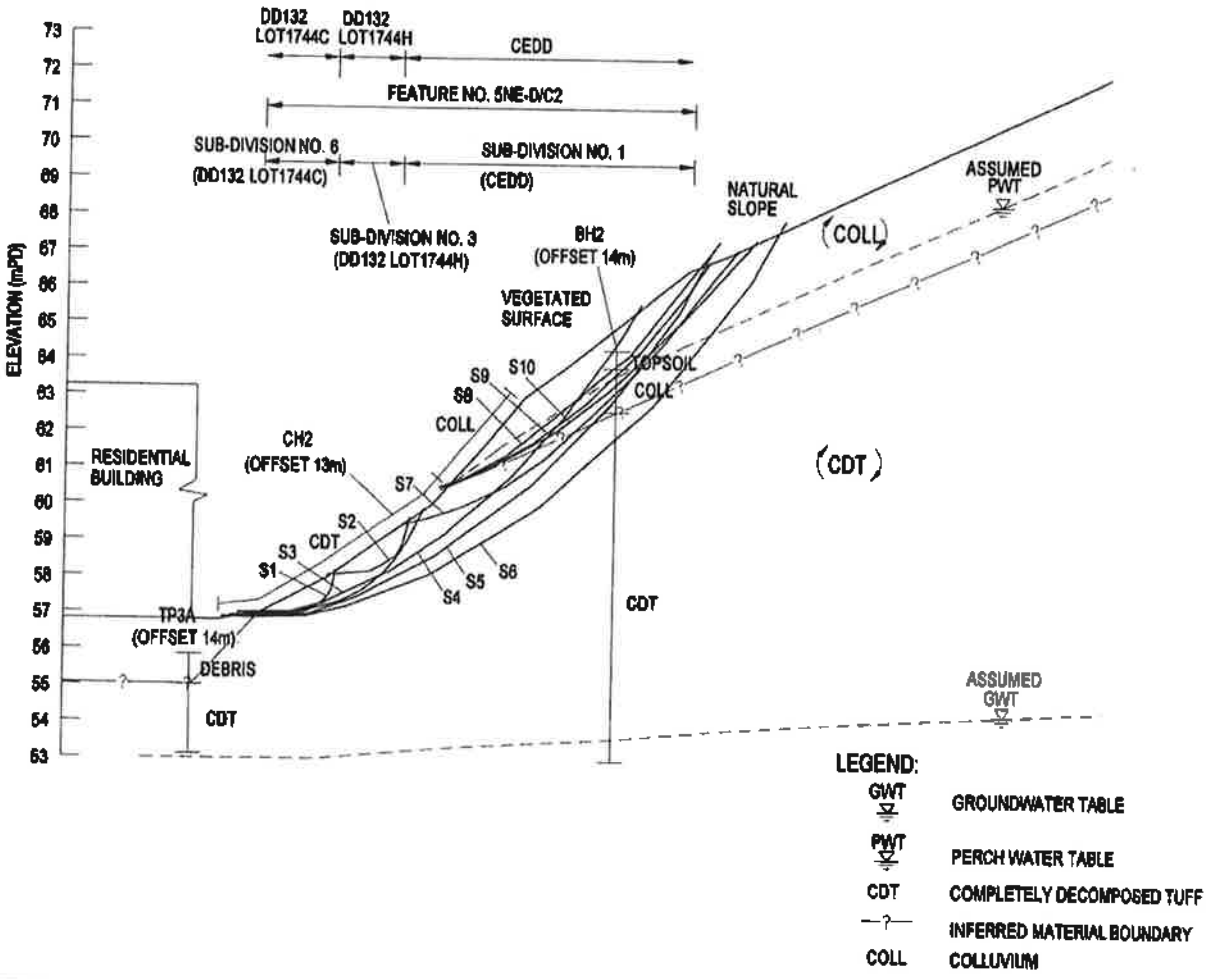
FEATURE NO(S). **5NE-D/C2**

SOIL PARAMETER TABLE

MATERIAL TYPE	c'(kPa)	ø'(°)	γ(kN/m³)
DEBRIS	2	35	19
COLLUVIUM	2	35	
CDT	3	36	

THE RESULT OF STABILITY ANALYSIS

SLIP SURFACE	CALCULATED FACTOR OF SAFETY
1	2.911
2	2.167
3	1.901
4	**1.161<1.2**
5	**1.122<1.2**
6	**1.146<1.2**
7	**1.022<1.2**
8	**1.033<1.2**
9	**0.972<1.2**
10	**0.978<1.2**



LEGEND:

GWT	GROUNDWATER TABLE
PWT	PERCH WATER TABLE
CDT	COMPLETELY DECOMPOSED TUFF
—?—	INFERRED MATERIAL BOUNDARY
COLL	COLLUVIUM

GEOLOGICAL MODEL AND STABILITY ANALYSIS OF SECTION 2 - 2

Civil Engineering and Development Department Geotechnical Engineering Office	Agreement No. CE10 / 2003 (GE) 10-year Extended LPM Project, Phase 4, Package F, Stability Studies of Private Slopes in Kowloon and Western New Territories -Investigation	Drawn: XLS	Checked: SLCK
		Scale: 1:200	Date: Dec 08
		Drg. No.: Fig-04B	Figure No.: 4B
Survey sheet reference no.: -		Scott Wilson Ltd 偉信顧問集團有限公司	

LOCATION: 150m WEST OF KWONG SHAN TSUEN, TUEN MUN	LOT NO(S). DD132 LOT1744 A, DD132 LOT1744 I, DD132 LOT1744 H, DD132 LOT1744 F, DD132 LOT1744 C, DD132 LOT1744 B'

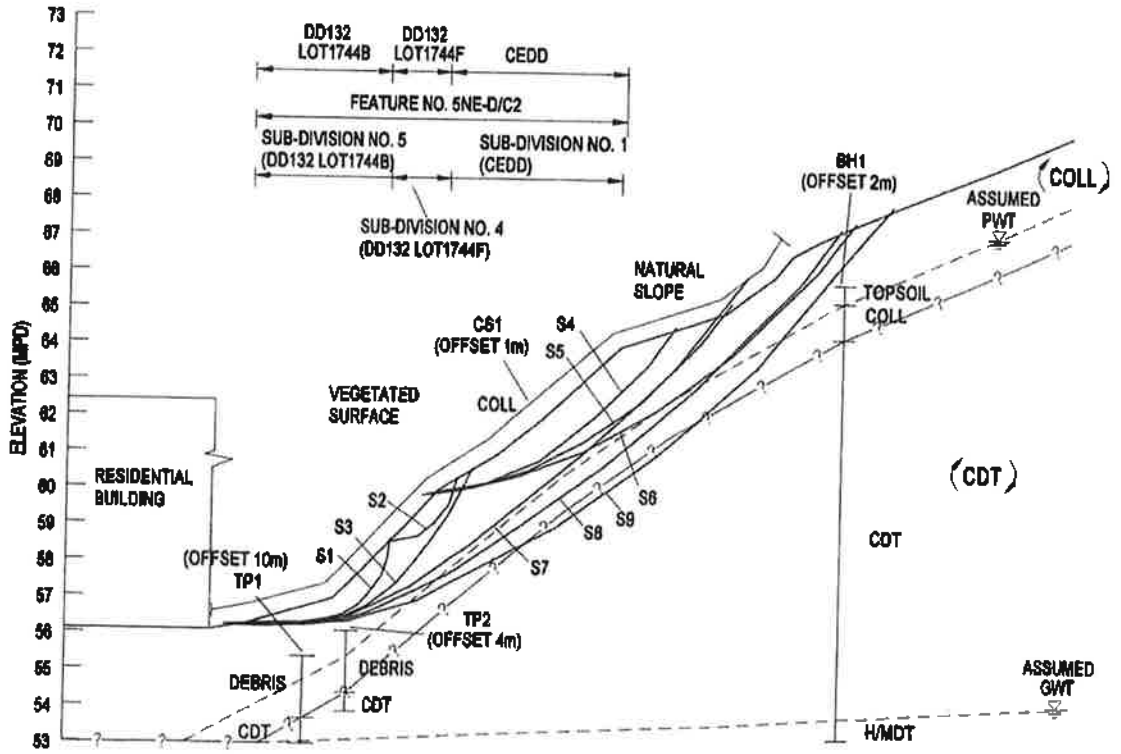
FEATURE NO(S). **5NE-D/C2**

SOIL PARAMETER TABLE

MATERIAL TYPE	c'(kPa)	ø'(°)	γ (kN/m^3)
DEBRIS	2	35	19
COLLUVIUM	2	35	
CDT	3	36	

THE RESULT OF STABILITY ANALYSIS

SLIP SURFACE	CALCULATED FACTOR OF SAFETY
1	2.033
2	1.512
3	1.480
4	1.315
5	1.354
6	1.370
7	**1.191<1.2**
8	**1.139<1.2**
9	**1.181<1.2**



LEGEND:

GWT	GROUNDWATER TABLE
PWT	PERCH WATER TABLE
CDT	COMPLETELY DECOMPOSED TUFF
—?—	INFERRED MATERIAL BOUNDARY
COLL	COLLUVIUM

GEOLOGICAL MODEL AND STABILITY ANALYSIS OF SECTION 3 - 3

CEDD Civil Engineering and Development Department Geotechnical Engineering Office Survey sheet reference no.: -	Agreement No. CE10 / 2003 (GE) 10-year Extended LPM Project, Phase 4, Package F, Stability Studies of Private Slopes in Kowloon and Western New Territories -Investigation	Drawn: XLS Checked: SLCK Scale: 1:200 Date: Dec 08 Drg. No.: Fig-04C Figure No.: 4C Scott Wilson Ltd 偉信顧問集團有限公司

Gammon

DRILLHOLE RECORD

HOLE No. BH 1

CONTRACT No. GE/2007/31

SHEET 1 of

PROJECT Feature No. SNE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

METHOD Rotary

MACHINE & No. 78-001

FLUSHING MEDIUM WATER

CO-ORDINATES
E 814399.80
N 830334.23

ORIENTATION Vertical

WORKS ORDER No. GE/2007/31/DC2/001

DATE from 04/08/2008 to 08/08/2008

GROUND LEVEL + 65.75 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D	Fracture Index	Tests	Samples (No, Type, Depth)	Reduced Level	Depth (m)	Legend	Grade	Description
04/08/2008	PX	08:00								65.25	0.50			Grey (N6), silty fine to coarse SAND with some angular fine to coarse gravel sized rock fragments and rootlets. (TOPSOIL)
		Dry at 18:00							INSPECTION PIT 0.45 0.50					Light brown (7.5YR 6/4), angular and subangular fine to coarse GRAVEL sized rock fragments in sandy silty matrix. (COLLUVIUM)
04/08/2008 05/08/2008		Dry at 08:00		88					0.25 1.50	64.25	1.50		V	Extremely weak, light grey (N7), mottled light yellowish brown, completely decomposed TUFFITE. (Stiff, sandy SILT)
				88					2.50 2.60					
				88					3.80 3.78	62.05	3.70		V	Very weak, light grey (N7), striped black and light brown, completely decomposed TUFFITE. Relict joints are iron and manganese stained. (Very stiff, sandy SILT)
05/08/2008 07/08/2008		4.50m at 18:00 Dry at 08:00	50	0					4.70 4.80	60.95	4.80		IV	Weak, light brownish grey (10YR 6/2), highly decomposed TUFFITE. (Subangular coarse GRAVEL and COBBLE of weak tuffite and quartz in sandy silty matrix)
				88					5.80 5.80	59.85	5.90		V	Extremely weak, light grey (N7), striped black and brown, completely decomposed TUFFITE. Relict joints are iron and manganese stained. (Stiff, sandy SILT)
				88					6.50 7.00					
				100					8.00 8.10					
	PX 8.50 HX			100					9.10 9.20	55.75	10.00			

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer / standpipe tip
- Standard penetration test
- Water absorption (Packer) test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED W K SIU

DATE 09/08/2008

CHECKED KEN MA

DATE 11/08/2008

REMARKS
1. Inspection pit was dug to 1.50m depth.
2. Piezometer was installed at 12.46m depth.

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Gammon

DRILLHOLE RECORD

CONTRACT No. GE/2007/31

HOLE No. BH 1

SHEET 2 of 2

PROJECT Feature No. SNE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

METHOD Rotary	CO-ORDINATES	WORKS ORDER No. GE/2007/31/DC2/003
MACHINE & No. 78-001	E 814399.80 N 830334.23	DATE from 04/08/2008 to 08/08/2008
FLUSHING MEDIUM WATER	ORIENTATION Vertical	GROUND LEVEL + 65.75 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
				100									V	As sheet 1 of 2.
				100										
			50	100										
		11.60m at 13:00												
		11.80m at 08:00		0										
	HK 12.96			100	43	34	>20			53.25	12.50		IV	Weak, light grey (N7), striped black and brown, highly decomposed TUFFITE. Relict joints are iron and manganese stained. (Angular coarse GRAVEL and COBBLE of weak tuffite)
							6.7							
				100	27	20	>20			52.79	12.96		III	Moderately strong, grey and brownish grey, moderately decomposed TUFFITE. Joints are very closely, locally closely spaced, rough planar, extremely to very narrow, iron and manganese stained, dipping 0°-10°, 30°-40° and 80°-90°.
							7.7							
							>20							
			70	100	44	33				51.79	13.96		IV	Weak, grey, highly decomposed TUFFITE. Joints are very closely, locally closely spaced, rough planar, very narrow, iron stained, dipping 0°-10°, 40°-50° and 80°-90°.
							6.2							
							>20							
							8.1			50.73	15.02		III	Moderately weak, grey, moderately decomposed TUFFITE. Joints are closely spaced, rough planar, extremely to very narrow, iron stained, dipping 20°-30° and 80°-90°.
		18.00								50.36	15.39			End of hole at 15.39m depth.

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer / standpipe tip
- Standard penetration test
- Water absorption (Packer) test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED W K SHU

DATE 09/08/2008

CHECKED KEN MA

DATE 11/08/2008

REMARKS

Gammon

DRILLHOLE RECORD

HOLE No. BH 2 [illegible]

CONTRACT No GE/2007/31

SHEET 1 of

PROJECT Feature No. SNE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

METHOD Rotary	CO-ORDINATES	WORKS ORDER No. GE/2007/31/DC2/003
MACHINE & No. 78-001	E 814414 37 N 830385 01	DATE from 19/07/2008 to 23/07/200
FLUSHING MEDIUM WATER	ORIENTATION Vertical	GROUND LEVEL + 64 26 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
19/07/2008	PX	08:00								64.26	0.00			
										63.76	0.50			Firm, dark brownish grey (2.5YR 4/1), sandy SILT with occasional subangular fine gravel sized rock fragments and much rootlets. (TOPSOIL)
		Dry at 18:00												Firm to stiff, brownish orange (10R 5/8), sandy SILT with occasional subangular fine gravel sized rock fragments and rootlets. (COLLUVIUM)
19/07/2008		Dry at 07:30		98						62.66	1.60		V	Extremely weak, light orangish brown (5YR 6/8), mottled grey, striped black and white, completely decomposed TUFFITE. Relict joints are kaolin coated and manganese stained. (Stiff, sandy SILT)
				98										
				100						60.46	3.80		V	Very weak, grey (N6), striped black and brown completely decomposed TUFFITE. Relict joints are iron and manganese stained. (Very stiff, sandy SILT)
			50	100						59.26	4.90		V	Extremely weak, light orangish brown (5YR 6/8), mottled grey, striped black and brown, completely decomposed TUFFITE. Relict joints are iron and manganese stained. (Stiff, sandy SILT)
				100						58.26	6.00		V	Very weak, light grey (N7), striped yellowish brown, completely decomposed TUFFITE. Relic joints are iron stained. (Very stiff, sandy SILT)
Overcore 20/07/2008	PX 7.10 HX	Dry at 18:00 Dry at 07:30		100						57.16	7.10		V	Extremely weak, grey (N6), spotted white, completely decomposed TUFFITE. (Stiff, sandy SILT)
				100						56.06	8.20		V	Extremely weak, light brownish grey (10YR 6/2), striped brown, completely decomposed TUFFITE. Relict joints are iron stained. (Stiff, sandy SILT)
				100						54.96	9.30		V	Very weak, grey (N6), striped black and brown, completely decomposed TUFFITE. Relict joints are iron and manganese stained. (Very stiff, sandy SILT)
										54.26	10.00			

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer / standpipe tip
- Standard penetration test
- Water absorption (Packer) test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED W K SIU

DATE 24/07/2008

CHECKED KEN MA

DATE 25/07/2008

REMARKS

1. Inspection pit was dug to 1.60m depth.
2. Piezometers were installed at 10.70m and 14.60m depths.

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Gammon

DRILLHOLE RECORD

HOLE No. **BH 2**

CONTRACT No. GE/2007/31

SHEET 2 of 2

PROJECT Feature No. SNE-0/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

METHOD Rotary	CO-ORDINATES	WORKS ORDER No. GE/2007/31/DC2/003
MACHINE & No. 78-001	E 814414.37 N 830365.01	DATE from 19/07/2008 to 20/07/2008
FLUSHING MEDIUM WATER	ORIENTATION Vertical	GROUND LEVEL + 64.26 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples (No. Type Depth)	Reduced Level	Depth (m)	Legend	Grade	Description
				100						54.26	10.00		V	As sheet 1 of 2.
			50	100					18 10.30-10.40	53.86	10.40		IV	Weak, grey (N6), striped brown, highly decomposed TUFFITE. Relict joints are iron stained. (Angular coarse GRAVEL and COBBLE of weak tuffite)
	HX 11.30			100	32	25	N.I		20 21 11.70-11.90	52.96	11.30		III	Moderately strong to moderately weak, light grey, striped black, moderately decomposed TUFFITE. Joints are closely to very closely, locally medium spaced, rough and smooth planar, extremely narrow to narrow, iron and manganese stained, dipping 0°-10°, 30°-40°, 60°-70° and 80°-90°.
							8.3							
				100	36	28	N.I			52.15	12.11		IV	12.11 - 12.24m: Weak, highly decomposed.
							4.5			52.02	12.24		III	
							N.I			51.80	12.46		IV	12.46 - 12.79m: Weak, highly decomposed.
										51.47	12.79		III	
			70	98	39	19	14.1							
							N.I			50.73	13.53		IV	13.53 - 13.64m: Weak, highly decomposed.
							13.6			50.62	13.64		III	
Stabilizer Solution		13.86m at 18:00					N.I							
		Dry at 07:30		100	54	0	14.1							
							N.I							
Stabilizer		18.00					10.7			49.12	15.14		V	End of hole at 15.14m depth.

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer / standpipe tip
- Standard penetration test
- Water absorption (Packer) test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED W K SIU

DATE 24/07/2008

CHECKED KEN MA

DATE 25/07/2008

REMARKS

Gammon

DRILLHOLE RECORD

HOLE No. **BH 3**

CONTRACT No. GE/2007/31

SHEET 1 of 2

PROJECT Feature No. 5NE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

METHOD Rotary	CO-ORDINATES	WORKS ORDER No. GE/2007/31/DC2/003
MACHINE & No. 78-001	E 814425.62 N 830398.11	DATE from 26/07/2008 to 30/07/2008
FLUSHING MEDIUM WATER	ORIENTATION Vertical	GROUND LEVEL + 67.58 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R Q D	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
26/07/2008	PX	08.00								67.58	0.00			
										57.08	0.50			Very stiff, brownish orange (10R 5/8), mottled yellow, sandy SILT with occasional angular fine to medium gravel sized rock fragments and rootlets. (COLLUVIUM)
														Firm to stiff, brownish orange (10R 5/8), sandy SILT with some angular and subangular fine to coarse gravel sized rock fragments. (COLLUVIUM)
				100						56.08	1.50		V	Extremely weak, light greenish grey (5BG 7/1), striped black, completely decomposed TUFFITE. Relict joints are manganese stained. (Stiff, sandy SILT)
		Dry at 18.00												
27/07/2008		Dry at 08:00	50	88										
				85						53.80	3.70		V	Extremely weak, light greenish grey (5BG 7/1), striped black and brown, completely decomposed TUFFITE. Relict joints are iron and manganese stained. (Stiff, sandy SILT)
				98						52.78	4.80		IV	Weak, greyish brown (5YR 5/2), striped black and brown, highly decomposed TUFFITE. Relict joints are iron and manganese stained. (Angular coarse GRAVEL and COBBLE of weak tuffite in sandy matrix)
	PX 5.80													
	HX		60	100	64	64	11.1			51.78	5.80		IV	Weak, light grey, spotted grey and light brownish yellow, highly decomposed TUFFITE. Joints are closely spaced, rough planar, very narrow to narrow, manganese stained, dipping 20°-30° and 80°-90°.
			58	100						51.42	6.16		IV	
	HX 6.89									50.59	6.99		III	Weak, grey (N6), highly decomposed TUFFITE. (Angular coarse GRAVEL and COBBLE of weak tuffite)
				100	99	94	6.8							Moderately strong, light grey, striped light yellow, moderately decomposed TUFFITE. Joints are closely spaced, rough planar, extremely narrow to narrow, iron and manganese stained, dipping 20°-30°, 60°-70° and 70°-80°. 7.48 - 7.53m: Quartz vein.
28/07/2008		5.99m at 18:00								60.10	7.48			
		6.76m at 08:00	70	97	92	91	2.1			59.37	8.21		II	Strong, grey, striped black, slightly decomposed TUFFITE. Joints are medium to closely spaced, rough planar, extremely narrow, iron and manganese stained, dipping 30°-40° and 60°-70°.
				100	84	69	11.8			57.58	10.00			

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer / standpipe tip
- Standard penetration test
- Water absorption (Packer) test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED W K SIU

DATE 31/07/2008

CHECKED KEN MA

DATE 01/08/2008

REMARKS

1. Inspection pit was dug to 1.50m depth.
2. Piezometer was installed at 6.40m depth.

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Gammon

DRILLHOLE RECORD

HOLE No. BH 3

CONTRACT No. GE/2007/31

SHEET 2 of 2

ECT Feature No. 5NE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

OD Rotary	CO-ORDINATES	WORKS ORDER No. GE/2007/31/DC2/003
INE & No. 78-001	E 814425.62 N 830398.11	DATE from 26/07/2008 to 30/07/2008
HING MEDIUM WATER	ORIENTATION Vertical	GROUND LEVEL + 67.58 mPD

Casing depth/size	Water Depth (m)	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
			100	84	69	5 3						W	As sheet 1 of 2.
						3 9							
			100	83	78	7 8			56.47	11.11		II	Strong, grey, dappled light pink and striped black, slightly decomposed TUFFITE with some quartz vein and void. Joints are closely, locally medium spaced, rough planar and undulating, extremely to very narrow, iron stained, dipping 30°-40°, 60°-70° and 80°-90°.
		>0	98	59	53	N I			55.00	12.58		III	Moderately strong, light grey and light greyish brown, dappled grey and striped grey, moderately decomposed TUFFITE. Joints are closely, locally very closely spaced, rough planar, extremely to very narrow, iron and manganese stained, dipping 0°-10°, 20°-30°, 60°-70° and 80°-90°.
	5.79m at 10:00					6 6							
	7.29m at 08:00		100	63	49	>20							
						8 7							
						6 5							
			97	87	74								
	3.29m at 18:00								52.36	15.22			End of hole at 15.22m depth.

Small disturbed sample
Large disturbed sample
SPT liner sample
U76 undisturbed sample
U100 undisturbed sample
Mazier sample
Piston sample

Water sample
Piezometer / standpipe tip
Standard penetration test
Water absorption (Packer) test
Permeability test
Impression packer test
In-situ vane shear test

LOGGED W K SIU
DATE 31/07/2008
CHECKED KEN MA
DATE 01/08/2008

REMARKS

TRIAL PIT RECORD

Gammon

Contract No. GE/2007/31 | Works Order No.:GE/2007/31/DC2/003

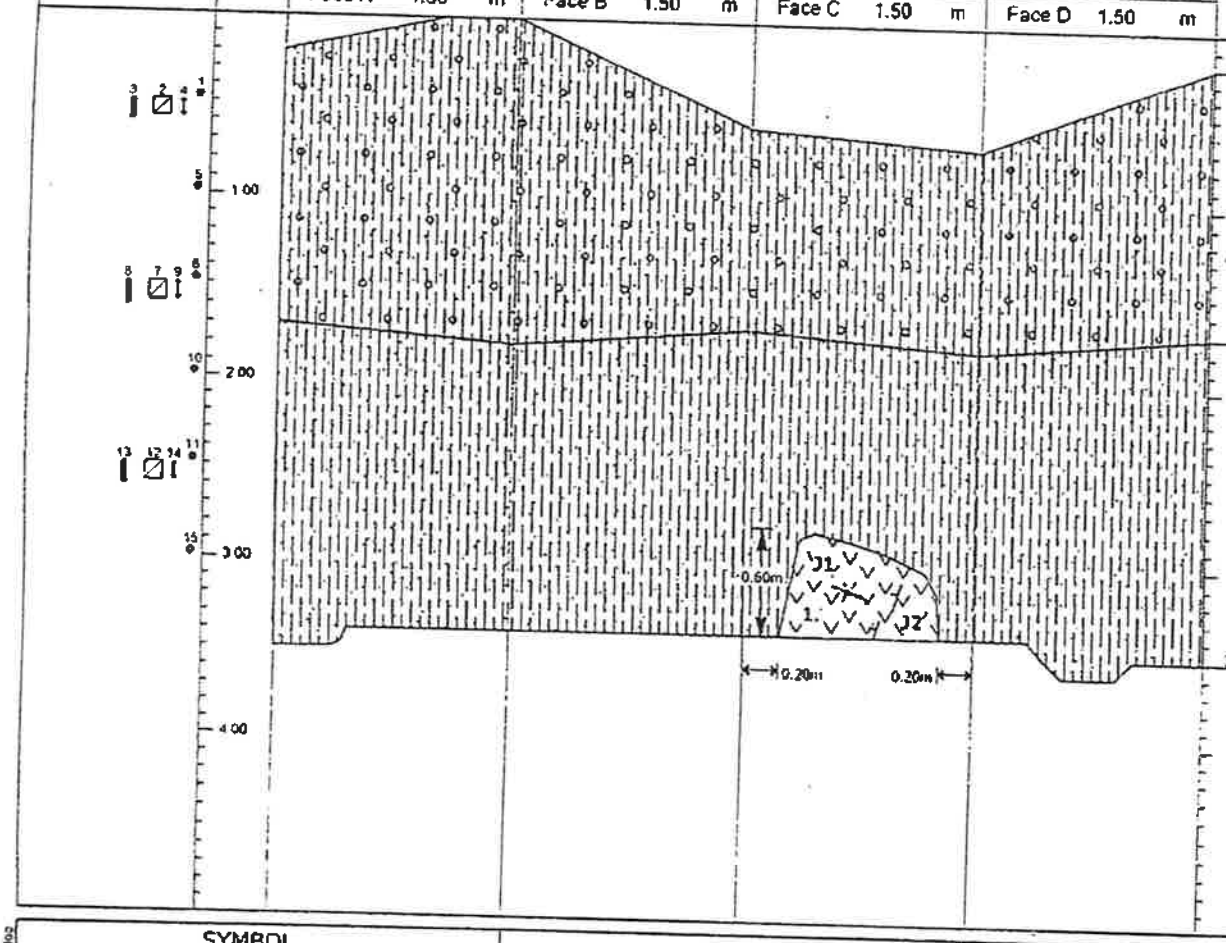
PROJECT: Feature No. 5NE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

Logged by : W K SIU
Date : 24/07/2008
Checked by : KEN MA
Date : 25/06/2008

Co-ordinates :
E 814412.06
N 830320.97
Ground Level :
+ 55.38 mPD

Excavation Dates: 18/07/2008 to 23/07/2008
Backfill Dates: 18/08/2008

TRIAL PIT No. TP 1

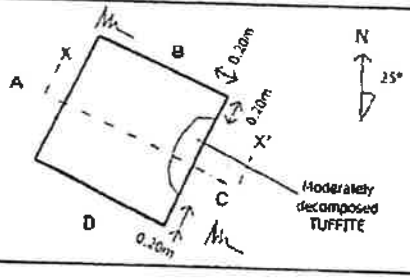


Depth (m)	Legend	Grade	Description
0.20			Firm, moist, brownish orange (10R 5/8), mottled light greyish brown, sandy SILT with some subangular and subrounded fine to coarse gravel sized rock fragments, and occasional brick fragments and abandoned PVC pipe. (LANDSLIDE DEBRIS)
1.70		V	Extremely weak, moist, light grey (N7) and grey (N6), striped yellowish brown, completely decomposed TUFF. Relict joints are iron stained. (Very stiff, sandy SILT) 1. Moderately weak, light brownish grey, striped black and light brown, moderately decomposed TUFFITE with manganese stained joint sets: J1) 40°/275° and 75°/035°.
3.50			End of trial pit at 3.50m depth. (maximum)

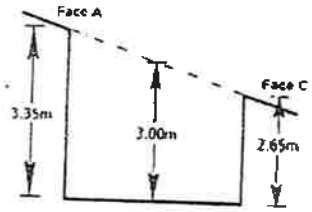
SYMBOL

- Small disturbed sample
- Large disturbed sample
- Undisturbed vertical sample
- Undisturbed horizontal sample
- Block sample
- In-situ density test
- Water sample
- Water seepage
- N - Schmidt Hammer Test

PLAN



SECTION (X-X')



REMARKS

Shoring: Yes Water Seepage: No
Stability: Stable
Maximum Depth: 3.50m Average Depth: 3.00m

1. Block samples were taken at 0.50m, 1.50m and 2.50m depths.
2. U100 (vertical) samples were taken at 0.50m, 1.50m and 2.50m depths.
3. Large disturbed samples were taken at 0.50m, 1.50m and 2.50m depths.

\\gammondata\shares\Tuen\2008 gint\311C trial pit.log

Gammon

Contract No. GE/2007/31	Works Order No.:GE/2007/31/DC2/003	Logged by : W K SIU	Co-ordinates : E 814416.28 N 830338.29 Ground Level : + 56.11 mPD	Excavation Dates: 18/07/2008 to 26/07/2008 Backfill Dates: 18/08/2008	TRIAL PIT No. TP 2
PROJECT: Feature No. 5NE-D/C2 150m Northwest of King Tin Temporary Housing Area, Tuen Mun		Date : 28/07/2008 Checked by : KEN MA Date : 29/07/2008			

Sketch: Face A 1.50 m | Face B 1.50 m | Face C 1.50 m | Face D 1.50 m

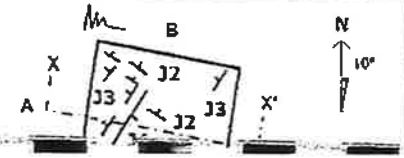
Sample & Tests	Depth (m)	Depth (m)	Legend	Grade	Description
	1.00	0.20			Dense, moist, light greyish brown (10YR 6/3) and brownish pink (10R 5/6), silty fine to coarse SAND with some subangular and subrounded fine to coarse gravel sized rock fragments and occasional rootlets. (LANDSLIDE DEBRIS)
		0.70			Firm to stiff, moist, brownish pink (10R 5/6), mottled light grey, sandy SILT with some angular and subangular fine to coarse gravel sized rock and brick fragments. (LANDSLIDE DEBRIS)
	2.00	1.70		III	Moderately strong, grey, spotted white, moderately decomposed TUFFITE with joint sets: J1) 65°/245° ; J2) 70°/050° ; J3) 65°/310° and J4) 75°/140°.
		2.20			End of trial pit at 2.20m depth. (maximum)
	3.00				
	4.00				

TRIAL PIT RECORD

SYMBOL

- Small disturbed sample
- Large disturbed sample
- Block sample
- In-situ density test
- Water sample

PLAN



SECTION (X-X')



REMARKS

Shoring: Yes Water Seepage: No
Stability: Stable
Maximum Depth: 2.20m Average Depth: 2.00m

1. Block samples were taken at 0.50m and 1.50m depths.
2. U100 (vertical) samples were taken at 0.50m and 1.50m depths.
3. Large disturbed samples were taken at ... and ...

P1-88

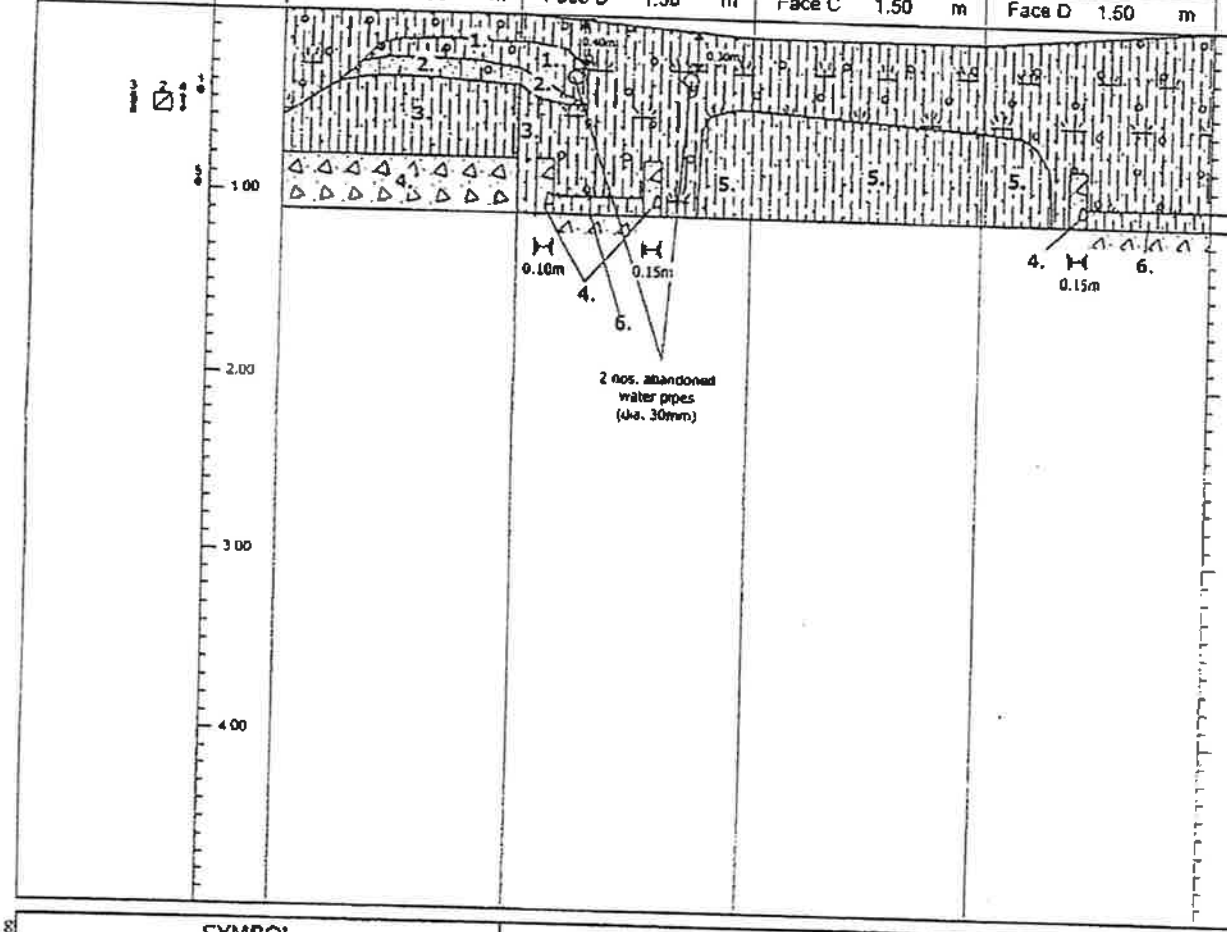
TRIAL PIT RECORD

Gammon

Contract No. GE/2007/31	Works Order No.:GE/2007/31/DC2/003	Logged by : WK SIU	Co-ordinates : E 814423.60 N 830359.45 Ground Level : + 55.80 mPD
PROJECT: Feature No. 5NE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun		Date : 26/07/2008 Checked by : KEN HA Date : 28/07/2008	Excavation Dates: 25/07/2008 to 25/07/2008 Backfill Dates: 18/08/2008

TRIAL PIT No. TP 3

Sketch

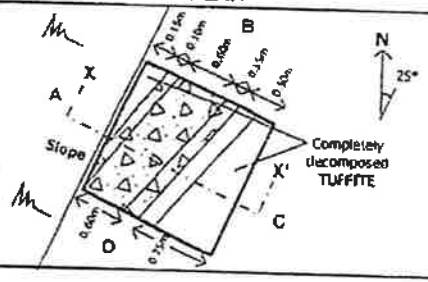


Sample & Tests	Depth (m)	Depth (m)	Legend	Grade	Description
	1.00	1.00			Firm to stiff, moist, brownish orange (10R 5/8) and greyish brown (10YR 5/2), sandy SILT with some angular fine to coarse gravel sized rock fragments and occasional wood and rootlets. (LANDSLIDE DEBRIS)
					1. Stiff, moist, dark greyish brown (2.5Y 4/2), sandy SILT with some subangular fine to coarse gravel sized rock fragments. (LANDSLIDE DEBRIS)
					2. Loose, moist, light brown (7.5YR 6/4), silty fine to coarse SAND with occasional subangular fine to medium gravel sized rock fragments. (LANDSLIDE DEBRIS)
					3. Extremely weak, moist, light grey (N7), striped black and brown, completely decomposed TUFFITE. Relict joints are iron and manganese stained. (Stiff, sandy SILT)
					4. U-channel.
					5. Extremely weak, moist, grey (N6), striped yellowish brown, completely decomposed TUFFITE. Relict joints are iron stained. (Stiff, sandy SILT)
		1.10			Stiff, moist, light pinkish brown (5YR 6/3), sandy SILT. (LANDSLIDE DEBRIS)
					End of trial pit at 1.10m depth. (maximum)

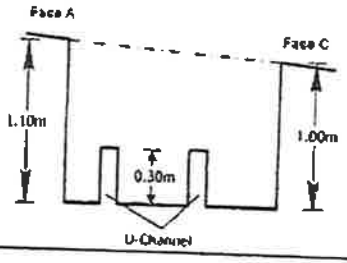
SYMBOL

- Small disturbed sample
- Large disturbed sample
- Undisturbed vertical sample
- Undisturbed horizontal sample
- Block sample
- In-situ density test
- Water sample
- Water seepage
- N = Schmidt Hammer Test

PLAN



SECTION (X-X')



REMARKS

Shoring: No Water Seepage: No
Stability: Stable
Maximum Depth: 1.10m Average Depth: 1.05m

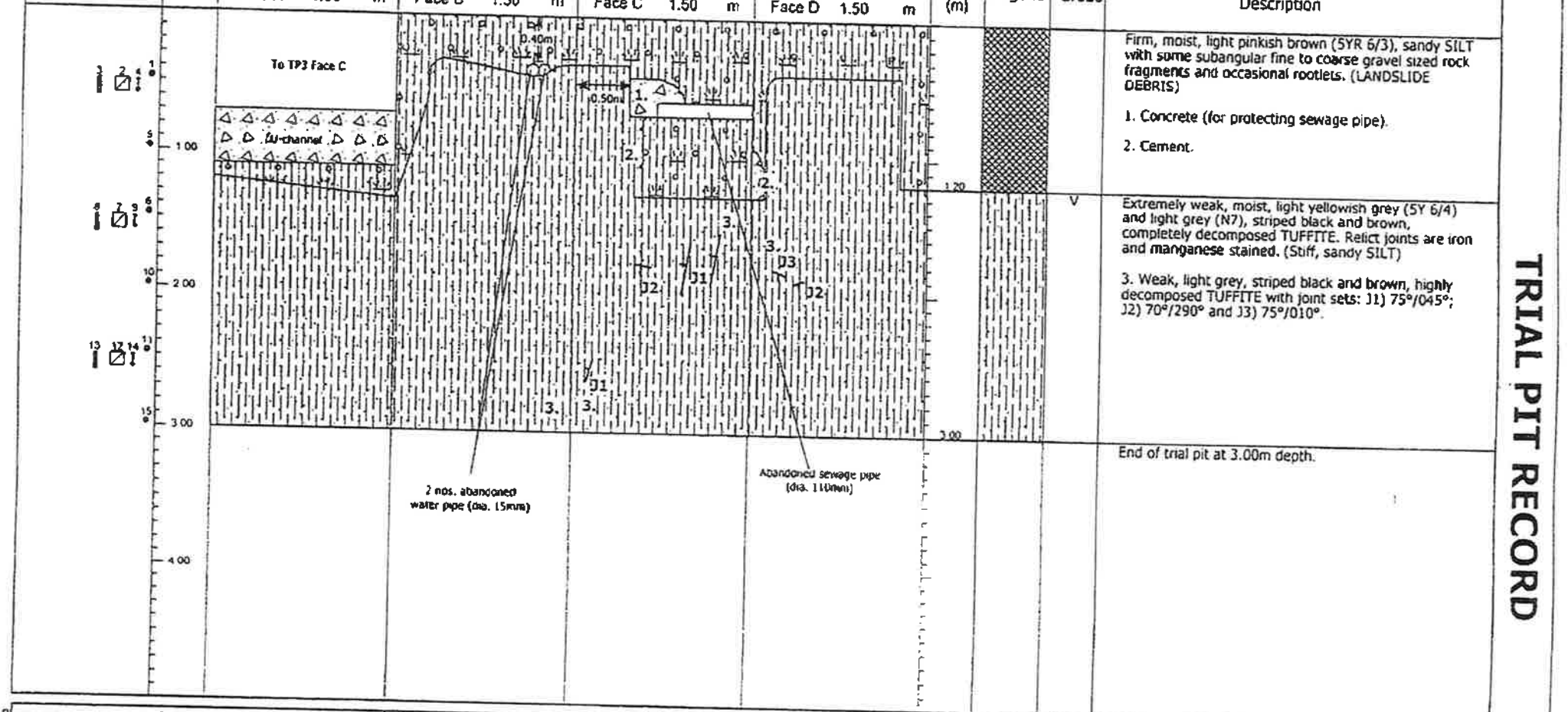
1. Utilities : 2 nos. abandoned water pipes were encountered at 0.40m and 0.30m depths.
2. Block sample was taken at 0.50m depth.
3. U100 (vertical) sample was taken at 0.50m depth.
4. Large disturbed sample was taken at 0.50m depth.

I:\Contract\Contract\July 2008 gINT 10 trial pit log

TRIAL PIT RECORD

Gammon

Contract No. GE/2007/31	Works Order No.:GE/2007/31/DC2/003	Logged by : W K Siu	Co-ordinates : E 814424.71 N 830359.06	Excavation Dates: 31/07/2008 to 04/08/2008	TRIAL PIT No. TP 3A
PROJECT: Feature No. SNE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun		Date : 05/08/2008	Ground Level : + 55.67 mPD	Backfill Dates: 18/08/2008	
		Checked by : Ken Ma			
		Date : 07/08/2008			

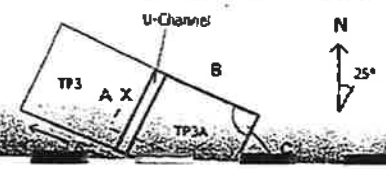


Sample & Tests	Depth (m)	Depth (m)	Legend	Grade	Description
1 2 4	1	1.20			Firm, moist, light pinkish brown (5YR 6/3), sandy SILT with some subangular fine to coarse gravel sized rock fragments and occasional rootlets. (LANDSLIDE DEBRIS) 1. Concrete (for protecting sewage pipe). 2. Cement.
5 6 8 7 9	2.00	3.00		V	Extremely weak, moist, light yellowish grey (5Y 6/4) and light grey (N7), striped black and brown, completely decomposed TUFFITE. Relict joints are iron and manganese stained. (Stiff, sandy SILT) 3. Weak, light grey, striped black and brown, highly decomposed TUFFITE with joint sets: J1) 75°/045°; J2) 70°/290° and J3) 75°/010°.
10 11 13 12 14 15	3.00				End of trial pit at 3.00m depth.
	4.00				

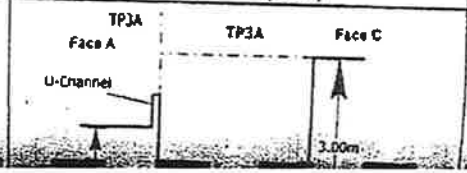
SYMBOL

- Small disturbed sample
- Block sample
- Large disturbed sample
- In-situ density test
- Undisturbed vertical core
- Water sample

PLAN



SECTION (X-X')



REMARKS

Shoring: Yes **Water Seepage:** No
Stability: Stable
Maximum Depth: 3.00m **Average Depth:** 3.00m

1. Utilities : 2 nos. abandoned water pipes (dia. 15mm) were encountered at 0.40m depths ; b) 1 no. abandoned sewage pipe (dia. 110mm) was encountered at 0.60m depth.
2. Block samples were taken at 0.50m, 1.50m and 2.50m depths.

Gammon

Contract No. GE/2007/31 | Works Order No.:GE/2007/31/DC2/003

PROJECT: Feature No. 5NE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

Logged by : W.K. STU
Date : 01/08/2008
Checked by : KEN MA
Date : 02/08/2008

Co-ordinates :
E 814433.55
N 830389.50
Ground Level :
+ 58.60 mPD

Excavation Dates:
28/07/2008 to 31/07/2008
Backfill Dates:
18/08/2008

TRIAL PIT NO.: TP 4

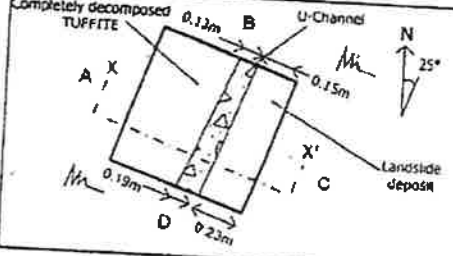
TRIAL PIT RECORD

Sample & Tests	Depth (m)	Sketch	Depth (m)	Legend	Grade	Description
		Face A 1.50 m, Face B 1.50 m, Face C 1.50 m, Face D 1.50 m	0.10			Soft to firm, moist, brownish orange (10R 5/8) and orangish brown (5YR 5/8), sandy SILT with some subangular fine to coarse gravel sized rock fragments and cobble of cement, and occasional rootlets. (LANDSLIDE DEBRIS)
1, 2, 4	1.00					1. U-Channel.
5, 6, 8			1.10		V	Old chunam surface.
7, 9	2.00	J2, J1, J2, 1., 1., 0.13m, 0.15m, 0.23m, 0.19m				Extremely weak, moist, light grey (N7), striped black, completely decomposed TUFFITE with manganese stained joint sets: J1) 85°/150° and J2) 85°/050°. (Stiff, sandy SILT)
10, 12, 13, 14, 11			3.50			
15	3.00					End of trial pit at 3.50m depth. (maximum)
	4.00					

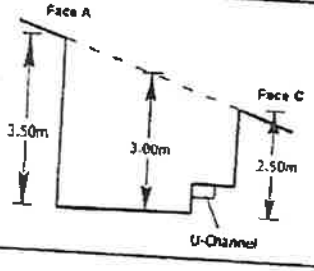
SYMBOL

- Small disturbed sample
- Large disturbed sample
- Undisturbed vertical sample
- Undisturbed horizontal sample
- Block sample
- In-situ density test
- Water sample
- Water seepage
- N - Schmidt Hammer Test

PLAN



SECTION (X-X')



REMARKS

Shoring: Yes **Water Seepage:** No
Stability: Stable
Maximum Depth: 3.50m **Average Depth:** 3.00m

1. Block samples were taken at 0.50m, 1.50m and 2.50m depths.
2. U100 (vertical) samples were taken at 0.50m, 1.50m and 2.50m depths.
3. Large disturbed samples were taken at 0.50m, 1.50m and 2.50m depths.

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TRIAL PIT RECORD

Gammon

Contract No. GE/2007/31	Works Order No.:GE/2007/31/DC2/003
PROJECT: Feature No. 5NE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun	

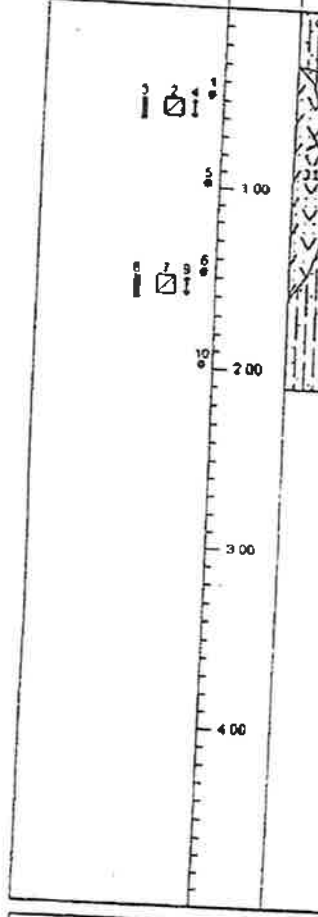
Logged by : W K SIU
Date : 01/08/2008
Checked by : KEN MA
Date : 02/08/2008

Co-ordinates :
E 814442.27
N 830405.66
Ground Level :
+ 57.07 mPD

Excavation Dates:
28/07/2008 to 31/07/2008
Backfill Dates:
18/08/2008

TRIAL PIT No.
TP 5

Sample & Tests | Depth (m) | Sketch (Face A 1.50 m, Face B 1.50 m, Face C 1.50 m, Face D 1.50 m) | Depth (m) | Legend | Grade | Description

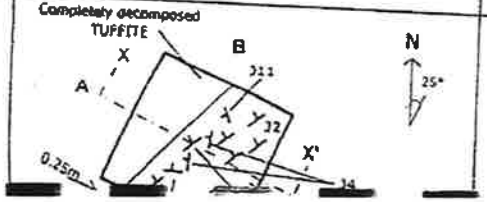


Depth (m)	Grade	Description
0.30	IV	Firm to stiff, moist, brownish orange (10R 5/8), sandy SILT with some subangular fine to coarse gravel sized rock fragments and occasional rootlets. (LANDSLIDE DEBRIS)
		1. Loose, moist, greyish brown 10YR 5/2), silty fine to coarse SAND with some angular fine to coarse gravel sized rock fragments and much rootlets. (TOPSOIL)
		2. Firm to stiff, moist, orangish brown (5YR 5/8), sandy SILT with occasional angular fine to coarse gravel sized rock fragments. (LANDSLIDE DEBRIS)
1.60	V	Weak, light grey (N7), striped black and brown, highly decomposed TUFFITE with iron and manganese stained joints sets: J1) 70°/120° ; J5) 85°/150° ; J6) 65°/315° ; J7) 85°/330° ; J8) 75°/255° ; J9) 65°/135° and J10) 80°/210°.
2.10		Extremely weak, moist, light grey (N7), striped black and brown, completely decomposed TUFFITE. Relict joints are iron and manganese stained. (Stiff, sandy SILT)
		3. Moderately strong, light grey, mottled white, moderately decomposed TUFFITE with iron and manganese stained joints sets: J2) 70°/290° ; J3) 65°/330° ; J4) 60°/230° ; J5) 85°/150° ; J7) 85°/330° and J11) 20°/260°.
		End of trial pit at 2.10m depth. (maximum)

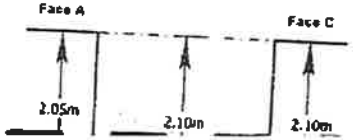
SYMBOL

- Small disturbed sample
- Large disturbed sample
- Undisturbed vertical sample
- Undisturbed
- Block sample
- In-situ density test
- Water sample
- Water seepage

PLAN



SECTION (X-X')



REMARKS

Shoring: Yes
Water Seepage: No
Stability: Stable
Maximum Depth: 2.10m
Average Depth: 2.10m

1. Block samples were taken at 0.50m and 1.50m depths.
2. U100 (vertical) samples were taken at 0.50m and 1.50m depths.
3. Large disturbed samples were taken at 0.50m and 1.50m depths.

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Gammon

SLOPE STRIPPING RECORD

STRIP No. D1-13
CS 1

CONTRACT No. GE/2007/31

Sheet 1 of

PROJECT :
Feature No. 5NE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

Datum (Toe)
Co-ordinates :
Easting 814414.47
Northing 830330.96
Level + 56.01 mPD

Datum (Crest)
Co-ordinates :
Easting 814401.71
Northing 830335.32
Level + 66.71 mPD

Works Order No.
GE/2007/31/DC

Slope No.:
5NE-D/C2

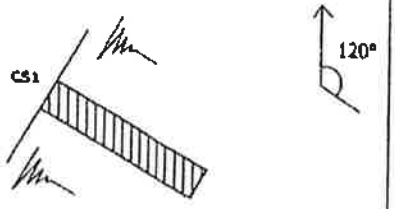
Date Started : 08/08/2008
Date Completed : 11/08/2008
Date Reinstated : 18/08/2008
Logged by : W K SIU
Date : 12/08/2008
Checked by : KEN MA
Date : 13/08/20

Distance from Crest (m)	Slope Angle (°)	Reduced Level (mPD)	Sample and Tests No.	Depth	Description	Legend	Grade	Discontinuities Dip / Dip Direction	Discontinuities Nature / Infilling
0		66.71							
0.00			1	0.50	Firm to stiff, moist, brown (10YR 5/4) and reddish brown (10R 4/4), sandy SILT with some angular coarse gravel and occasional cobble of weak tuffite. (COLLUVIUM)				
	26		2	1.00					
1.60		66.01	3	1.50					
2			4	2.00					
			5	2.50					
3			6	3.00					
			7	3.50					
4			8	4.00					
			9	4.50					
5	82		10	5.00					
			11	5.50					
6			12	6.00					
			13	6.50					
7			14	7.00					
			15	7.50					
7.80		59.87	16	8.00					
8			17	8.50					
	15		18	9.00					
9			19	9.50					
9.60		59.40	20	10.00					
10			21	10.50					
			22	11.00					
11	40		23	11.50					
			24	12.00					
12			25	12.50					
12.30		57.67	26	13.00					
	15		27	13.50					
13			28	14.00					
13.30		57.41	29	14.50					
	45								
14									
14.30		56.70							
	20								
15	15.00	56.46							

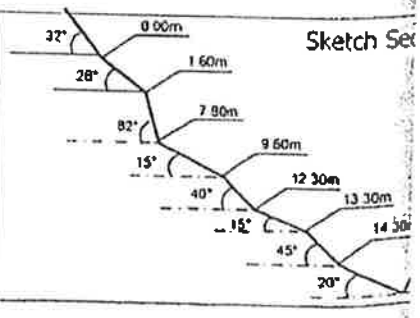
Remarks :
1. 0.00-17.00m: Common ground surface.

Symbol
- Small Disturbed Sample
- Large Disturbed Sample
- Block Sample
- Water Sample
- In-Situ Density Test
- N - Schmidt Hammer Test
- Seepage

Sketch Plan :



Sketch Sec



Boundaries as shown 01130 dgn 23rd July 2008 Layout1

Gammon

SLOPE STRIPPING RECORD

CONTRACT No. GE/2007/31

STRIP No. CS 1

Sheet 2 of 2

PROJECT :
Feature No. SNE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

Datum (Toe)
Co-ordinates :
Easting 814414.47
Northing 830330.96
Level + 56.01 mPD

Datum (Crest)
Co-ordinates :
Easting 814401.71
Northing 830335.32
Level + 66.71 mPD

Works Order No.: GE/2007/31/DC2/003

Slope No.: SNE-D/C2

Date Started : 08/08/2008

Date Completed : 11/08/2008

Date Reinstated : 18/08/2008

Logged by : W K SIU
Date : 12/08/2008

Checked by : KEN MA
Date : 13/08/2008

Distance from Crest (m)	Slope Angle (°)	Reduced Level (mPD)	Sample and Tests No.	Sample and Tests Depth	Description	Legend	Grade	Discontinuities Dip / Dip Direction	Discontinuities Nature of Infilling
15			30	15.00	As sheet 1 of 2.				
	20		31	15.50					
16			32	16.00					
16.50		56.01	33	16.50	End of slope stripping at 16.50m depth.				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

Remarks :

Symbol
- ● Small Disturbed Sample
- ▮ Large Disturbed Sample
- ☑ Block Sample
- ▲ Water Sample
- Ψ In-Situ Density Test
- ⌐ N - Schmidt Hammer Test
- ☾ Seepage

Sketch Plan :

See Sheet 1 of 2

Sketch Section :

See Sheet 1 of 2

I:\gmw\forms\15july2008 gmt3110 slope stripping

SLOPE STRIPPING RECORD

Gammon

STRIP No. 1-15
CS 2

CONTRACT No. GE/2007/31

Sheet 1 of 1

PROJECT :
Feature No. 5NE-D/C2 150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

Datum (Toe)
Co-ordinates :
Easting 814424.30
Northing 830363.89
Level + 56.04 mPD

Datum (Crest)
Co-ordinates :
Easting 814417.44
Northing 830365.65
Level + 62.94 mPD

Works Order No.: GE/2007/31/DC2

Slope No.: 5NE-D/C2

Date Started : 31/07/2008

Date Completed : 02/08/2008

Date Reinstated : 18/08/2008

Logged by : W K SIU
Date : 04/08/2008

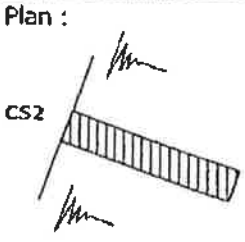
Checked by : KEN MA
Date : 05/08/2008

Distance from Crest (m)	Slope Angle (°)	Reduced Level (mPD)	Sample and Tests No.	Depth	Description	Legend	Grade	Discontinuities: Dip / Dip Direction	Discontinuities: Nature of Infilling
0		62.94							
0.00			1	0.50	Stiff, moist, reddish brown (10R 4/4), sandy SILT with some subangular fine to coarse gravel and cobble of weak tuff, and occasional rootlets. (COLLUVIUM)				
1			2	1.00					
	50		3	1.50					
2			4	2.00					
			5	2.50					
2.90		60.72	6	3.00					
3	3.30	60.49	7	3.50	Extremely weak, moist, light grey (N7), striped yellowish brown, completely decomposed TUFFITE. Relict joints are iron stained. (Stiff, sandy SILT)				
4			8	4.00					
			9	4.50					
5	35		10	5.00					
			11	5.50					
6			12	6.00	5.80m: With some tree (dia. 20-30mm).				
			13	6.50					
7.00		58.37	14	7.00			V		
7			15	7.50					
8			16	8.00					
	50		17	8.50					
9			18	9.00					
			19	9.50	9.00 - 9.40m: Boulder of moderately weak tuffite. (COLLUVIUM)				
10.00		56.04	20	10.00					
10					End of slope stripping at 10.00m depth.				
11									
12									
13									
14									
15									

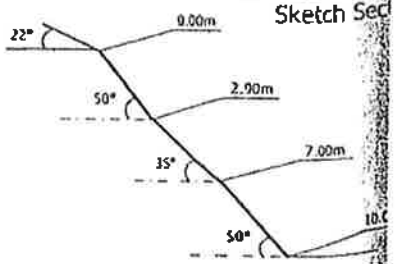
Remarks :
1. 0.00-10.00m: Chunam surface. (30-50mm thick)

Symbol
- Small Disturbed Sample
- Large Disturbed Sample
- Block Sample
- Water Sample
- In-Situ Density Test
- N - Schmidt Hammer Test
- Seepage

Sketch Plan :



Sketch Sec



guidelines\slope stripping\slope stripping record 2008.dgn 11/1/2008 4:47:47 PM

Gammon

SLOPE STRIPPING RECORD

CONTRACT No. GE/2007/31

STRIP No. CS 3

Sheet 1 of 1

PROJECT :
Feature No. 5NE-D/C2 150m Northwest of Ming Tin Temporary Housing Area, Tuen Mun

Datum (Toe)
Co-ordinates :
Easting 814437.73
Northing 830396.29
Level + 57.42 mPD

Datum (Crest)
Co-ordinates :
Easting 814428.01
Northing 830399.81
Level + 67.01 mPD

Works Order No.: GE/2007/31/DC2/003

Slope No.: 5NE-D/C2

Date Started : 31/07/2008

Date Completed : 02/08/2008

Date Reinstated : 18/08/2008

Logged by : W K SIU
Date : 04/08/2008

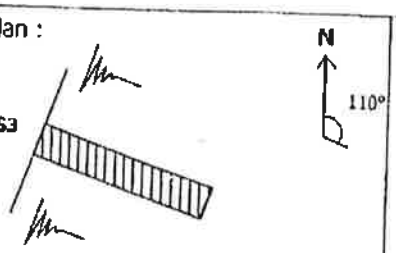
Checked by : KEN MA
Date : 05/08/2008

Distance from Crest (m)	Slope Angle (°)	Reduced Level (mPD)	Sample and Tests No.	Depth	Description	Legend	Grade	Discontinuities Dip / Dip Direction	Discontinuities Nature of Infilling
0		67.01							
0.00			1	0.50	Very stiff, moist, reddish brown (10R 4/4), sandy SILT with some subangular coarse gravel and cobble of weak tuff. (COLLUVIUM)				
1	25		2	1.00					
1.70		66.29	3	1.50					
2			4	2.00					
			5	2.50					
3	65		6	3.00					
			7	3.50					
4			8	4.00					
4.40		63.84	9	4.50					
5			10	5.00	Extremely weak, moist, light grey (N7), striped yellowish brown, completely decomposed TUFFITE. Relict joints are iron stained. (Stiff, sandy SILT)				
			11	5.50					
6	40		12	6.00					
			13	6.50					
7			14	7.00					
7.40		61.92	15	7.50					
8			16	8.00			V		
	55		17	8.50					
9			18	9.00				J1) 85°/270°	Iron stained
9.20		60.44	19	9.50				J2) 60°/105°	Iron stained
10			20	10.00					
			21	10.50					
11	40		22	11.00					
11.20		59.16	23	11.50	Firm to stiff, moist, brownish red (10R 4/6) and reddish brown (10R 4/4), sandy SILT with some subangular fine to coarse gravel and cobble of weak tuff and cement. (LANDSLIDE DEBRIS)				
12			24	12.00					
12.40		58.38	25	12.50					
13			26	13.00					
	32		27	13.50					
14			28	14.00					
14.20		57.42			End of slope stripping at 14.20m depth.				
15									

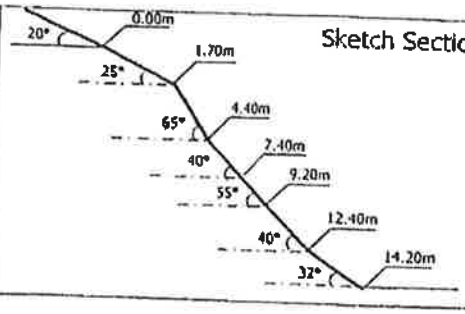
Remarks :
.00-9.00m: Common ground surface.
.00-14.20m: Chunam surface. (30-50mm thick)

Symbol
- Small Disturbed Sample
- Large Disturbed Sample
- Block Sample
- Water Sample
- In-Situ Density Test
- N - Schmidt Hammer Test
- Seepage

Sketch Plan :



Sketch Section :



Gammon

STANDPIPE AND PIEZOMETER MONITORING RESULTS

Contract No. GE/2007/31

Works Order No. GE/2007/31/DC2/003

Project : Feature No. 5NE-D/C2
150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

DATE	Recorded by	Drillhole No. / Pipe No.		
		BH2-P1 (11.50m bgl)	BH2-P2 (15.00m bgl)	
29 Jul 2008	C S AU	Dry	Dry	
30 Jul 2008	C S AU	Dry	Dry	
31 Jul 2008	C S AU	Dry	Dry	
01 Aug 2008	C S AU	Dry	Dry	
02 Aug 2008	C S AU	Dry	Dry	
04 Aug 2008	C S AU	Dry	Dry	
05 Aug 2008	C S AU	Dry	Dry	

Checked by: KEN MA

Depths are from pipe top

Date: 08 Aug 2008

Gammon

STANDPIPE AND PIEZOMETER MONITORING RESULTS

Contract No. GE/2007/31

Works Orde

GE/2007/31/D

Project : Feature No. SNE-D/C2

150m Northwest of Hing Tin Temporary Housing Area, Tuen Mun

DATE	Recorded by	Drillhole No. / Pipe No.		
		BH3-P (6.40m bgl)		
04 Aug 2008	C S AU	Dry		
05 Aug 2008	C S AU	Dry		
06 Aug 2008	C S AU	Dry		
07 Aug 2008	C S AU	Dry		
08 Aug 2008	C S AU	Dry		
09 Aug 2008	C S AU	Dry		
11 Aug 2008	C S AU	Dry		

Checked by: KEN MA

Date: 12 Aug

Depths are from pi

AERIAL PHOTOGRAPH INTERPRETATION REPORT

C1

Agreement No. CE10/2003 (GE)
Feature No. 5NE-D/C2
Location: 150m west of Kwong Shan Tsuen, Tuen Mun
Prepared by: S. Lam **Checked by:** L. Shum **Date:** March 2006

SUMMARY OF API

From the aerial photographs it is apparent that feature No. **5NE-D/C2** was formed between 1963 and 1964. The study feature was formed most likely in association with the houses at the slope toe.

1.0 SITE HISTORY

Based on the interpretation of available photographs listed in Section 5, the history of the site is given below:

Year	Description
1963	The study feature had not been formed and the study area was a natural hillside.
1964	The lower slope of study feature was formed likely in association with the site formation works of the houses at the slope toe. Site formation works of the houses were still in progress.
1982	The entire study feature was formed. The slope surface is covered with vegetation. Natural hillside is behind the slope crest
1983	No changes to the study feature are apparent in the Aerial Photographs viewed.
1985	Ditto
1988	Ditto
1990	Ditto
1992	Ditto
1993	Ditto
1994	Ditto
1995	Ditto

1999	Ditto
2001	Ditto
2003	Ditto

2.0 BOULDERS & COLLUVIUM

No evidence of either boulders or colluvium in the vicinity of the study featu apparent in any of the aerial photographs viewed.

3.0 PAST INSTABILITY

No evidence of any past cases of instability in the vicinity of the study feature apparent in any of the aerial photographs viewed.

4.0 SURFACE HYDROLOGY

No natural drainage channels were observed in the vicinity of the study area in an the aerial photographs viewed.

5.0 LIST OF PHOTOGRAPHS VIEWED

Year	Aerial Photograph No.
1963	Y09283, Y09284
1964	Y11711
1982	44613, 44614
1983	52231
1985	67262
1988	A15088
1990	A24328, A24329
1992	A32848, A32849
1993	CN5585, CN5586
1994	CN8523
1995	CN12393, CN12394
1999	CN24898, 24899
2001	CN29804, CN29805
2003	CW49764, CW49765

PHASE II SYSTEMATIC INSPECTION OF FEATURES IN THE TERRITORY (SIFT II Version 3.8)

SIFT No: 5NE-25D/S 1 GEO Reg. No: _____ Grid Ref. : 830 380 N 814 425 E

Location: Cut slope above building platforms north west of Hing Tin Temporary Housing Area, Tuen Mun

1. Registration Criteria from GEO circular 7/93:

- ☐ retaining wall greater than 3m high.
- ☐ fill slope or FR greater than 5m high.
- ☐ fill slope or FR less than 5m high which pose a direct risk to life in the event of failure.
- ☑ cut slope or CR greater than 3m high. Aerial Photograph Year and Number 6·1993·A35248 - A35249
- ☐ does not meet GEO slope registration criteria _____

2. SIFT Classification of Fill features:

☐ Class A Fill feature considered to have similar circumstances to the Baguio landslide site.

Class B Fill feature considered to meet GEO criteria for slope registration but does not meet criteria A.

- ☐ B(i) Unregistered or Misregistered, formed pre-1978 or illegal tipped fill and may not have been checked by GEO.
- ☐ B(ii) Registered and not studied to Stage II equivalent.
- ☐ B(iii) Unregistered or Misregistered, formed post-1977.

☐ Class C All other features.

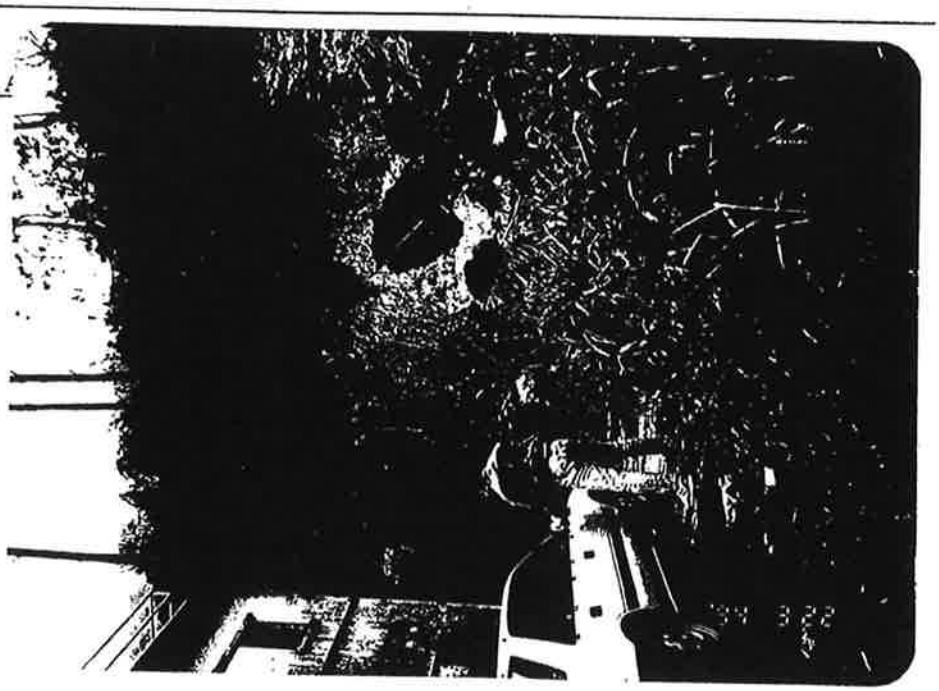
3. Modified B & P Risk Assessment: *for A, B(i), B(ii) only. See Section 6 on page 2 for details.*

☐ Low ☐ Low to moderate ☐ Moderate ☐ Moderate to High ☐ High ☐ Very High

4. Remarks : Cut slope shows two failures in 1993 photographs.

5. Photograph : Mandatory for A

Negative Number
TP 287 - 17



Compiled by *Rob Banks* GE(CONSULTANT)/ 3 dated 14/3/ 1994

<5706> D:\LANSIFT\SIFTFM.RB

BASIC INFORMATION	Feature Ref. No. : 5NE-D/C 2

Location: 150m NW of Hing Tin Temporary Housing Area

Approximate Coordinates **Northing** 830372 **Easting** 814423

SLOPE PART

Max. Height (m) : 10.7 **Length (m) :** 118 **Avg. Angle (deg) :** 40

WALL PART

Max. Height (m) : **Length (m) :**

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest : Undeveloped green belt

Distance of Facility from Crest (m) : 0

Facility at Toe : Cottage, licensed and squatter area

Distance of Facility from Toe (m) : 2

Consequence-to-life Category : 1

Sift Class : C1

Remark : NIL

Maintenance Responsibility :

Sub Div. No : 1	**Main. Parties :** CEDD
Sub Div. No : 2	**Main. Parties :** DD132 LOT1744 I
Sub Div. No : 3	**Main. Parties :** DD132 LOT1744 H
Sub Div. No : 4	**Main. Parties :** DD132 LOT1744 F
Sub Div. No : 5	**Main. Parties :** DD132 LOT1744 B
Sub Div. No : 6	**Main. Parties :** DD132 LOT1744 C
Sub Div. No : 7	**Main. Parties :** DD132 LOT1744 A

Other Information | **Feature Ref. No. :** 5NE-D/C 2

CNPCS : 1.67 **Ranking Score (NPRS) :** **SIFT Ref. :**

CNPCS Source : SIRST record : Provided by SIRST Consultants

ENHANCED MAINTENANCE

Upgraded by

Prescriptive Design Using GEO Report No. 56	Non-prescriptive Design including Conventional Design
NULL	NULL

Improved by

Type 1 /Type 2 Prescriptive Measures	Type 3 Prescriptive Measures (not up to upgrading standard)	Actual Completion Date
NULL	NULL	NULL

DADS

DH Order

Recommendation Date	Served Date	Defaulted Date	Lot Address	File Reference	Notice No.	Discharged Date
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Advisory Letter

Recommendation Date	Served Date	Lot Address	File Reference	Status of Letter
NULL	NULL	NULL	NULL	NULL

CHECKING STATUS

Relevant Files :

Part : NULL

Checking Status : NULL

LPMIS

Agreement No.: CE10/2003 **Study Type:** Stage 2 Study **GE/Consultant:** SWL

Study Status: Study completed - Final report submitted

Report No.: S2R 49/2006 **Draft Report Date:** 06-MAR-06 **Study Completion Date:** 24-MAR-06

Recommendation: DH Order;

Remarks:

LPM Contract No.:

Works Status:

Works Commencement Date: **Works Completion Date:**

Type of Upgrading Works:

Drawing No.: **Maintenance Manual No.:**

D4

Agreement No.: CE12/2007 **Study Type:** Stage 3 Study Under Schedule of Rates Contract **GE/Consultant:** JCL

Study Status: Study completed - Final report submitted

Report No.: S3R 159/2009 **Draft Report Date:** 11-MAY-09 **Study Completion Date:** 28-SEP-09

Recommendation: Upgrading works;

Remarks:

LPM Contract No.: GE/2008/07

Works Status: Works in progress

Works Commencement Date: 16-NOV-09 **Works Completion Date:**

Type of Upgrading Works:

Drawing No.: **Maintenance Manual No.:**

Slope / Wall Detail Data	Feature Ref. No. : 5NE-D/C 2

SLOPE PART

Material Description :	**Material Type:**	Soil	**Geology:**	
Dimensions :	**Max. Height (m):**	10.7	**Length (m):**	118
	Average Angle (deg):	40		
	No. of Berms:	0	**Min. Berm Width (m):**	0
Surface Protection :	**% Bare:**	30	**% Shotcrete:**	0
	% Vegetated:	65	**% Other Cover:**	0
	% Chunam:	5		
Weepholes :	**Size (mm):**	0	**Spacing (m):**	0

Drainage :

Type	Size (mm)
NULL	NULL

WALL PART

NULL

SERVICES

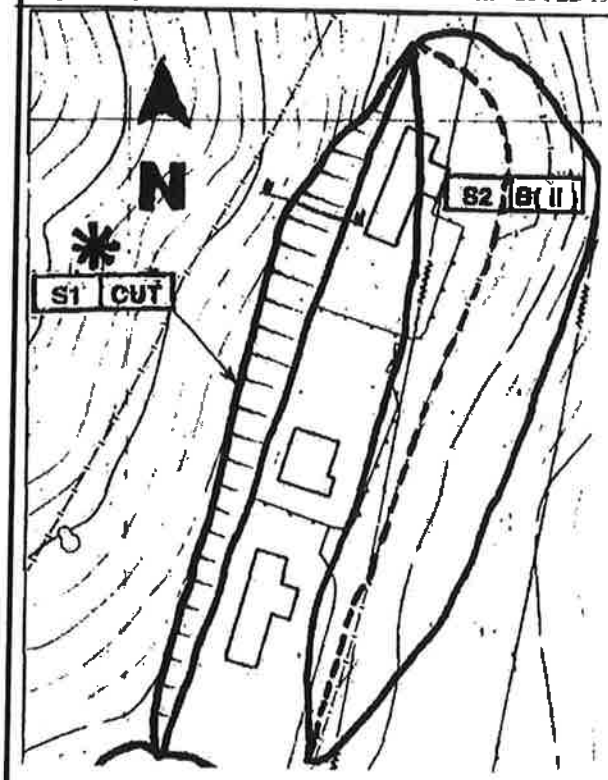
Utilities Type	Size	Location	Remark
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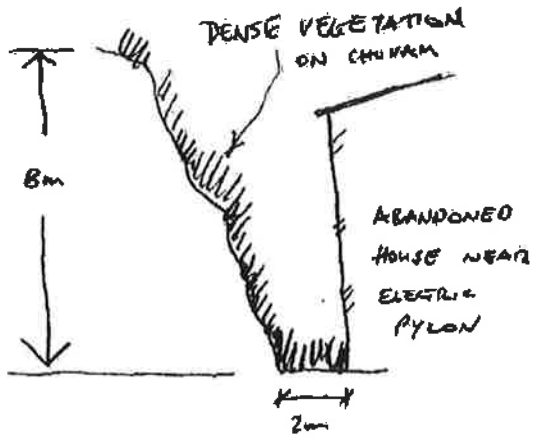
STAGE 1 STUDY REPORT FOR C, CR AND R FEATURES

Feature Reference No. : 5NE-D/C 2

Location 150MM NW OF HING TIN TEMPORARY HOUSING AREA, TUEN MUN.

Inspected by : Chow, A.S.L. on 28 FEB 1997 | Weather Mainly Fine | District MW | GE Area :





Section No.	Height (m) H1	Height (m) H2	Type of Toe Facility	Distance from Toe (m)	Type of Crest Facility	Distance from Crest (m)	Consequence Category #	Engineering Judgement #
1-1	8	0	Other lightly-used open space	1.5	Undeveloped green belt	0	3	P

Sign of Seepage : *Slope : None*

Criterion A satisfied ? **NO**

Sign of Distress : *Slope : Minor (near crest, mid-portion, at toe)*

Minor slip scar at crest and chunam cracking

Criterion D satisfied ? **NO**

Non-routine maintenance required : *NO*

Note :

Masonry wall/Masonry facing ? *NO*

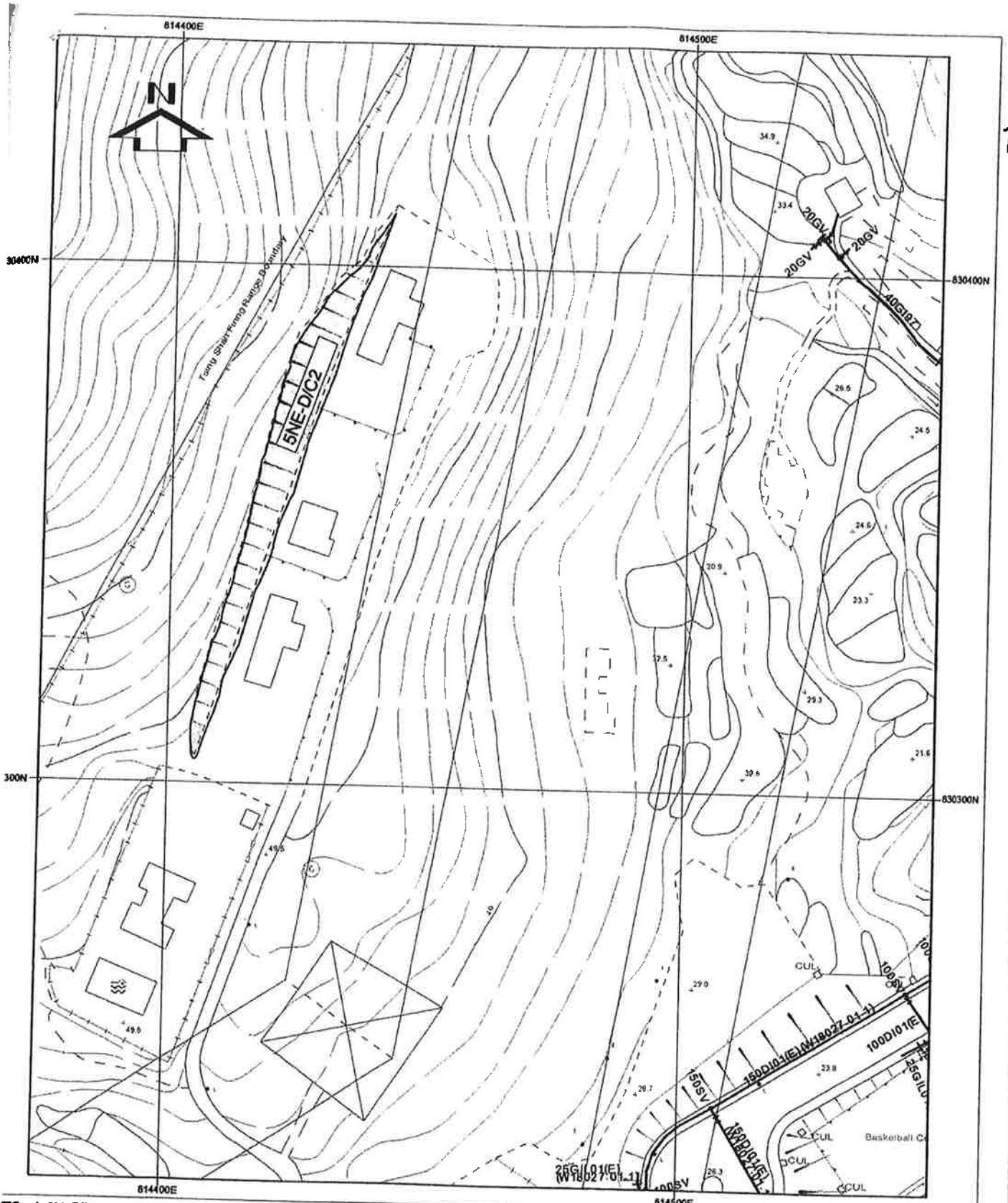
Note :

Consequence category (for critical section) : **3**

Observations : 4Z is abandoned house. The slope feature is covered by heavy vegetation. Obsauing detailed inspection.

Emergency action required	*NO* Private : ☐ BD	Government : ☐	
Action to initiate preventive works/ Study	Criterion A/ Criterion D ☐	Action by: Private ☐ Government ☐	Further Study ☑ Action by: Private Owner(s) ☑ Government ☑
Other external action	Check/repair service ☐ Action by		Engineer Inspection ☑ Non-routine Maintenance ☐ Private ☑ Government : ☑

Recommendation agreed : Post : Date :



ES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.
3. INFORMATION ON ALIGNMENT OF MAINS IS OF INDICATIVE VALUE ONLY. WHERE POSITIONAL ACCURACY MAY BE OF IMPORTANCE, DETAILS SHOULD BE SITE CHECKED.
4. FOR MAINS RECORDS SIGN CONVENTIONS AND DESIGNATIONS, PLEASE REFER TO DRAWING NO. SK 3988A ATTACHED.
5. NO EXISTING SALT WATER MAINS IN THE VICINITY OF THE SITE.
6. NO EXISTING W.S.D. CABLE IN THE VICINITY OF THE SITE.
7. NO PROPOSED W.S.D. CABLE IN THE VICINITY OF THE SITE.
8. THE SITE IS NOT WITHIN W.S.D. GATHERING GROUNDS.
9. NO. W.S.D. RESERVE / LAND ALLOCATION WITHIN THE SITE AREA.

SUBJECT SITE

PART COPY OF FRESH WATER MAINS RECORD PLAN(S)

W67880/5-NE-25D

FILE REF: (2) IN WSD/NTW 2/25/2/99 T/J (41)

REF. CODE:49W05M	SHEET 1 OF 1	SCALE 1:1000

水 務 署
Water Supplies Department

Drainage Services Department
Mainland North Division
14th floor, Kowloon Government Offices,
405 Nathan Road, Kowloon.

渠務署
新界北渠務部
九龍彌敦道 405 號
九龍政府合署 14 樓

本署檔案	Our Ref :	( ) in MN 12/TM/10/0
來函檔案	Your Ref :	03124/G/720/01/027160
電　　話	Telephone : (852)	2300 1259
圖文傳真	Fax : (852) 2770 4761, (852) 2771 9765	

File	03124/G/720/01		
By			
Reply Ref.			
	Action	Info	Copy
CHR		✓	
SCCK		✓	

29 November 2

7 Dec 05
03124
GF 73/10

Scott Wilson Ltd
38th Floor, Metroplaza Tower 1,
223 Hing Fong Road, Kwai Fong,
Hong Kong.
(Attn.: Philip Chiang)

Dear Sirs,

Agreement No. CE 10/2003 (GE)
10-Year Extended LPM Project, Phase 4, Package F
Kowloon and Western New Territories
Stability Studies of Private Slopes – Investigation
Request for Utilities Information (5NE-D/C2)

I refer to your above referenced letter dated 21.11.05.

(i) According to our record, there is no existing public drainage near your slope. However, we cannot guarantee that all the public drainage installations have been included into our drainage record plans. Should the works be of significance to you, you should verify the actual site condition by sub-surface explorations.

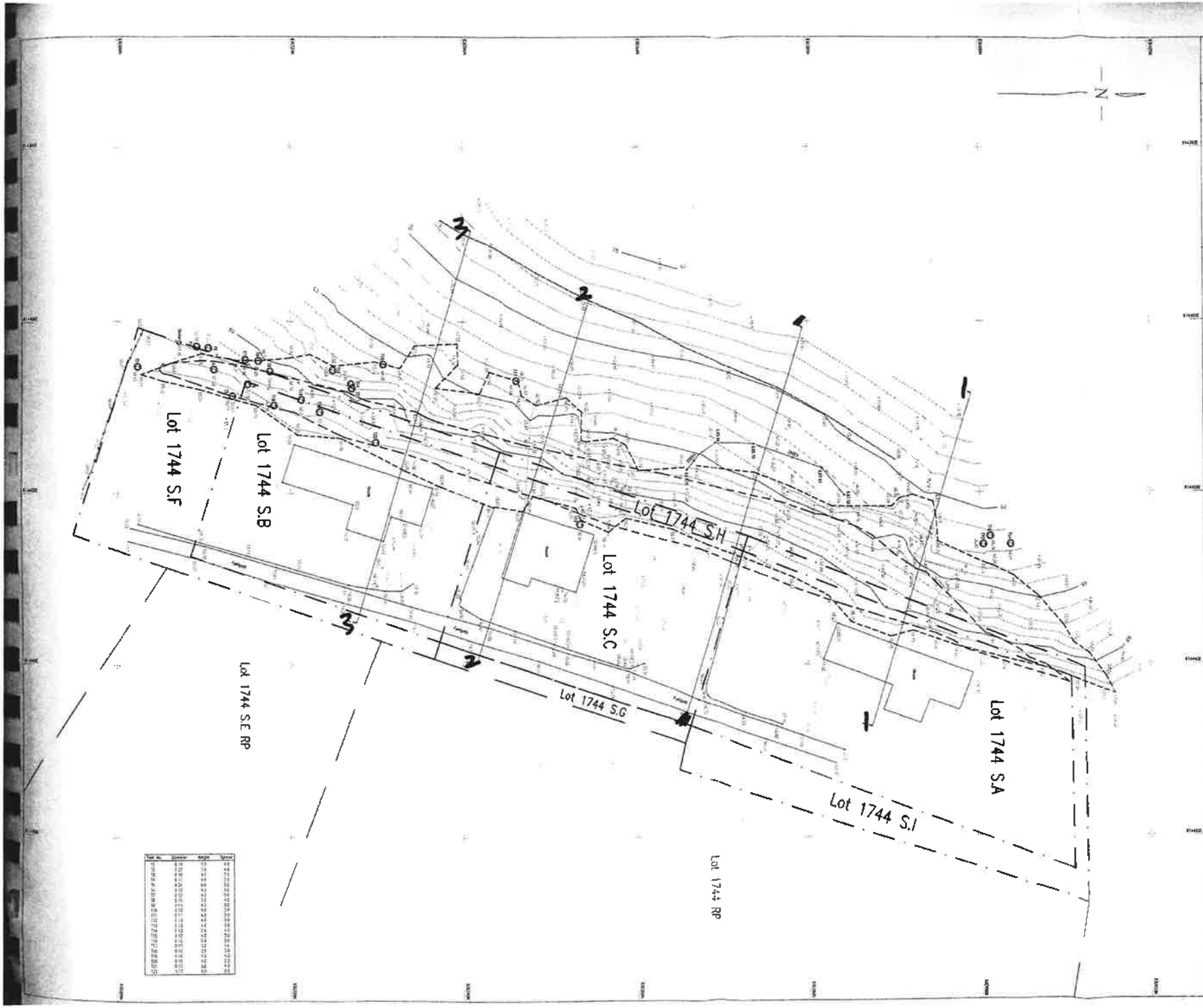
(ii) If there is proposed works for the slope, you should take all precautionary measures to prevent damage to the existing public drains and channels near and within the site. In the event of the any damage to them, the contractor shall be held responsible for the cost of all necessary repair works, compensation and any other consequences arising thereof.

(iii) Free flow condition of the adjacent public drains, sewers, channels and watercourse should be maintained at all time during and after your works.

Yours faithfully,

(Ambrose K. Y. LAM)
for Chief Engineer / Mainland North
Drainage Services Department

HWL/AKYL



NOTES

1. Hong Kong Geodetic Datum HD80
2. All levels refer to Principal Datum Hong Kong
3. All units are in metres
4. All spot heights are obtained by the Geomil plane or a close

ABBREVIATIONS :-

BB	BILLBOARD	ME	MANHOLE (ELECTRIC)
BO	BOLLARD	MF	MANHOLE (FOUL WATER)
BH	BORE HOLE	MH	MANHOLE
BO	BOLLARD	MP	METER POST
CB	CONCRETE BLOCK	MS	MANHOLE (STORM WATER)
CL	CORNER LEVEL	MT	MANHOLE (TELEPHONE)
CO	CORNWAY	RCP	REFUSE COLLECTION POINT
CP	CARDSPIN	SC	STEP CHANNEL
CWL	CULVERT	SHR	SHRINE
DP	DRAW PIT	SP	SIGN POLE
EB	ELECTRIC BOX	ST	STOOL
EP	ELECTRICITY POST	TC	TELEPHONE CHAMBER
ESS	ELECTRIC SUB-STATION	TJ	TRAFFIC JOINT
ET	ELECTRIC TRANS/FORMER	TP	TELEPHONE POLE
FB	FLOWER BED	TS	TEMPORARY STRUCTURE
FH	FIRE HYDRANT	TV	MANHOLE (CABLE TV CO)
FG	FENCE GATE ROUND	UC	U CHANNEL
FP	FOOTPATH	V	VALVE
GA	GRATING	VA	VALVE AIR
GU	GULLY	VG	VALVE GAS
IC	INSPECTION COVER	VO	VALVE
L	HYDRO LEVEL	VW	VALVE-WATER WORKS
LP	LAMP POST	WT	WATER TANK
		WP	WATER POND

SYMBOLS :-

- ARTIFICIAL SLOPE
- BOUNDARY LINE
- BOUNDARY POINT
- BOULDER
- CARSPIN
- CONTOUR (5m)
- CONTOUR (1m)
- DRAIN
- FENCE/RAILING
- FREE STANDING WALL
- GATE
- HOARDING
- SLOPE TOP / BOTTOM LANDSLIDE SCAR
- STEPS
- TREE WITH NO.
- U-CHANNEL WITH FLOW & SIZE
- VERTICAL CUTTING
- FEATURE BOUNDARY

SHEET INDEX :-



No.	Date	Description/Reason	Checked	Approved

REVISION

	Name	Initial	Date
Surveyed			
Drawn			
Checked			

Approved

Wan Kong Ling
PRINCIPAL LAND SURVEYOR
Date: February 2004

Client

SCOTT WILSON LIMITED

Contract

AGREEMENT NO. CE 10/2003 (GE)
10-YEAR EXTENDED LPM PROJECT,
PHASE 4, PACKAGE F,
KOWLOON & WESTERN NEW TERRITORIES

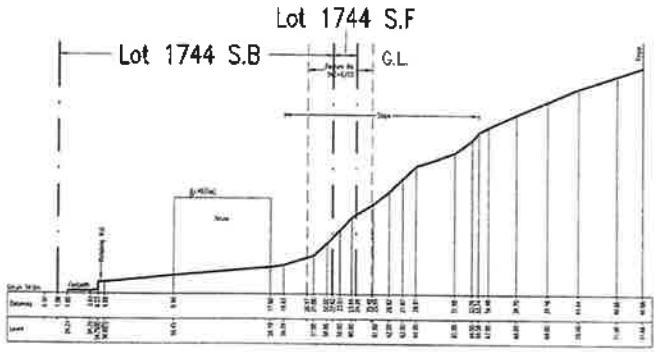
Drawing title

FEATURE NO. SNE-D/C2
PO TIN ESTATE
LOTS 1744 S.A TO S.C, S.F, S.H & S.I
IN D.D.132
TOPOGRAPHIC SURVEY & BOUNDARY SURVEY

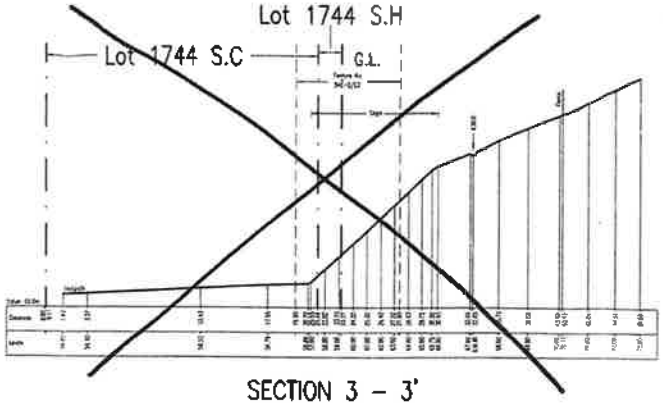
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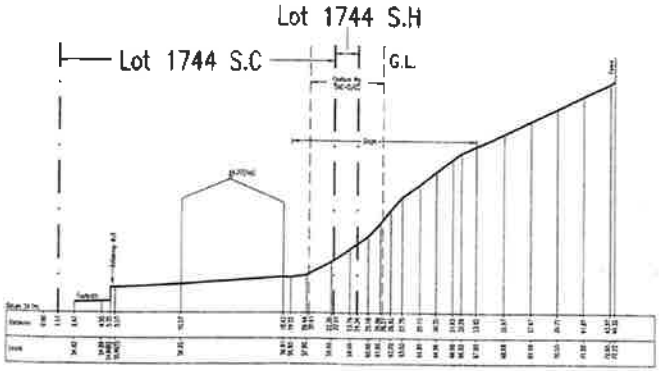
Helen Chan Professional Land Survey Ltd
陳婉珠測量師行有限公司
[illegible]



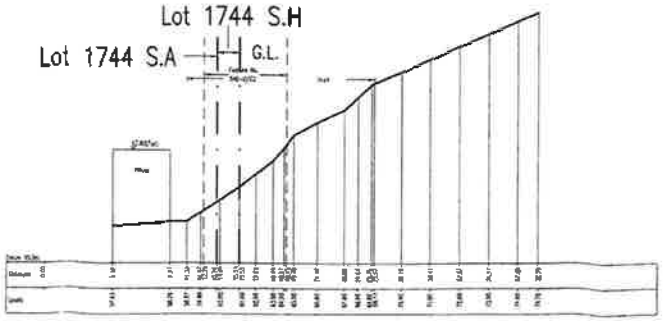
SECTION 3 - 3'



SECTION 3 – 3'



SECTION 2 - 2'



SECTION 1 - 1'

NOTES:
1. Hong Kong Geodetic Datum 1980
2. All levels refer to Principal Datum Hong Kong
3. All units are in Metres
4. All spot level positions are indicated by the decimal point of a cross.

ABBREVIATIONS :-

BB	SIGN BOARD	MH	MANHOLE (ELECTRIC)
BO	BOULDER	MH	MANHOLE (FOUL WATER)
BH	BORE HOLE	MH	MANHOLE
BS	BOLLARD	MP	METER POST
CB	CONCRETE BLOCK	MS	MANHOLE (STORM WATER)
CL	CENTER LEVEL	MT	MANHOLE (TELEPHONE)
CO	COLUMN	PCP	PETROL COLLECTION POINT
CP	CATENARY	SC	STRIP CHANNEL
CUL	CULVERT	SHR	SHRINE
DP	DRAIN PIE	SP	SIGN POLE
EB	ELECTRIC BOX	ST	STONE
EP	ELECTRICITY POST	TE	TELEPHONE CHAMBER
ESS	ELECTRIC SUB-STATION	TL	TRAFFIC LIGHT
ET	ELECTRIC TRANSFORMER	TP	TELEPHONE POLE
FB	FLOWER BED	TS	TEMPORARY STRUCTURE
FH	FIRE HYDRANT	TV	MANHOLE (CABLE TV CO)
FIG	FIGURE INTO ROUND	UC	U CHANNEL
FP	FOOTPATH	V	VALVE
GN	GRATING	VP	VALVE PIPE
GU	GULLY	VS	VALVE CAS
IC	INSPECTION COVER	VT	VENT
IL	INVERT LEVEL	WW	WATER WORKS
LP	LAMP POST	WT	WATER TANK
		WP	WATER POINT

SYMBOLS :-

- ARTIFICIAL SLOPE
- BOUNDARY LINE
- BOUNDARY POINT
- BOULDER
- CANOPY
- CONTOUR (5m)
- CONTOUR (1m)
- DRAIN
- FENCE/RAILING
- FREE STANDING WALL
- GATE
- HOARDING
- SLOPE TOP / BOTTOM LANDSCAPE SOFT
- STEPS
- TREE WITH NO.
- DIRECTION, MAIN FLOW & SIZE
- VERTICAL CUTTING
- FEATURE BOUNDARY

SHEET INDEX :-

1

No.	Date	Description	Checked	Approved
Revision				

	Name	Initial	Date
Surveyed	W.K. Cheung		25/11/2005
Drawn	W.H. Lai		28/11/2005
Checked	Adrian Sun		29/11/2005
Approved			

Hong Kong Survey
Chief, Photo and Mapping Unit
Date: January 18 2006

Client
SCOTT WILSON LIMITED

Contract
AGREEMENT NO. CE 10/2003 (GE)
10-YEAR EXTENDED CPM PROJECT,
PHASE 4, PACKAGE F,
KOWLOON & WESTERN NEW TERRITORIES

Survey Title
FEATURE NO. SNE-D/C2
PO TIN ESTATE
LOTS 1744 S.A TO S.C, S.F, S.H & S.J
IN D.D 132
TOPOGRAPHIC SURVEY & BOUNDARY SURVEY

Drawing No. HPL933E/S/01
Scale 1:200

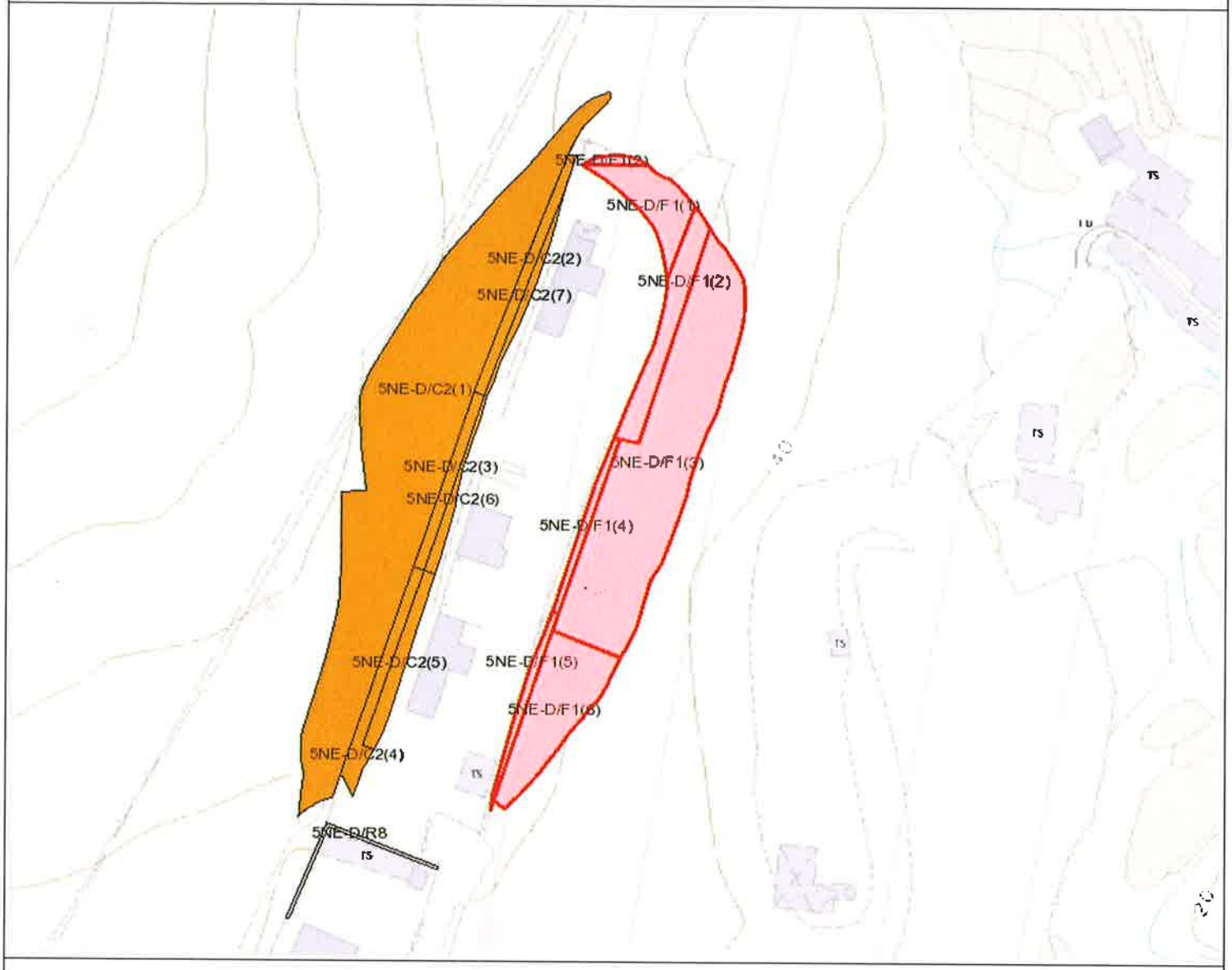
Helen Chan Professional Land Survey Ltd
陳婉琪測量師行有限公司
2/F, No 86 Lung Sum Avenue, Sheung Shui, N.T., Hong Kong
Tel: 26935959 Fax: 26936966
E-mail: hcp@helenchan.com.hk

APPENDIX G

SLOPE INFORMATION SYSTEM (SIS) RECORDS

Annex

Location Plan



Legend

- Slope Area(s)
- Search Location
- Slope(s) Maintained by Government
- Slope(s) Maintained by Private Party/Parties
- Slope(s) Maintained by Government and Private Party/Parties

ESTATE MANAGEMENT SECTION
LANDS DEPARTMENT

This Plan is **NOT TO SCALE** and intended for **IDENTIFICATION** only. All information shown on this plan **MUST** be verified by field survey.

Printed on: 28/10/2019

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Search Criteria: 5NE-D/F1

Slope Maintenance Responsibility Report (5NE-D/C2)	ESTATE MANAGEMENT SECTION LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	**5NE-D/C2**		**Sub-Division**	1
	Location	WITHIN AND ADJOINING DD132 LOTS1744 A, B, C, F, H, I		
	Responsible Lot/Party	Lands Department	**Maintenance Agent**	Lands Department
	Remarks	For enquiries about the maintenance of this slope / sub-division of the slope, please contact the Maintenance Agent direct.		
2	**5NE-D/C2**		**Sub-Division**	2
	Location	WITHIN AND ADJOINING DD132 LOTS1744 A, B, C, F, H, I		
	Responsible Lot/Party	DD132 LOT1744 I	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		
3	**5NE-D/C2**		**Sub-Division**	3
	Location	WITHIN AND ADJOINING DD132 LOTS1744 A, B, C, F, H, I		
	Responsible Lot/Party	DD132 LOT1744 H	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		
4	**5NE-D/C2**		**Sub-Division**	4
	Location	WITHIN AND ADJOINING DD132 LOTS1744 A, B, C, F, H, I		
	Responsible Lot/Party	DD132 LOT1744 F	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		
5	**5NE-D/C2**		**Sub-Division**	5
	Location	WITHIN AND ADJOINING DD132 LOTS1744 A, B, C, F, H, I		
	Responsible Lot/Party	DD132 LOT1744 B	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		
6	**5NE-D/C2**		**Sub-Division**	6
	Location	WITHIN AND ADJOINING DD132 LOTS1744 A, B, C, F, H, I		
	Responsible Lot/Party	DD132 LOT1744 C	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		
7	**5NE-D/C2**		**Sub-Division**	7
	Location	WITHIN AND ADJOINING DD132 LOTS1744 A, B, C, F, H, I		
	Responsible Lot/Party	DD132 LOT1744 A	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		

- End of Report -

Notes:

(i) The location plan in Annex is for identification purposes of slope(s) only.

(ii) The slope(s) as listed in the Slope Maintenance Responsibility Report may not be shown on the location plan in Annex.

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Slope Maintenance Responsibility Report (5NE-D/F1)	ESTATE MANAGEMENT SECTION LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	**5NE-D/F1**		**Sub-Division**	1
	Location	WITHIN VARIOUS SECTIONS OF DD132 LOT1744		
	Responsible Lot/Party	DD132 LOT1744 A	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		
2	**5NE-D/F1**		**Sub-Division**	2
	Location	WITHIN VARIOUS SECTIONS OF DD132 LOT1744		
	Responsible Lot/Party	DD132 LOT1744 I	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		
3	**5NE-D/F1**		**Sub-Division**	3
	Location	WITHIN VARIOUS SECTIONS OF DD132 LOT1744		
	Responsible Lot/Party	DD132 LOT1744 RP	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		
4	**5NE-D/F1**		**Sub-Division**	4
	Location	WITHIN VARIOUS SECTIONS OF DD132 LOT1744		
	Responsible Lot/Party	DD132 LOT1744 G	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		
5	**5NE-D/F1**		**Sub-Division**	5
	Location	WITHIN VARIOUS SECTIONS OF DD132 LOT1744		
	Responsible Lot/Party	DD132 LOT1744 F	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		
6	**5NE-D/F1**		**Sub-Division**	6
	Location	WITHIN VARIOUS SECTIONS OF DD132 LOT1744		
	Responsible Lot/Party	DD132 LOT1744 E,RP	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		

- End of Report -

Notes:

(i) The location plan in Annex is for identification purposes of slope(s) only.

(ii) The slope(s) as listed in the Slope Maintenance Responsibility Report may not be shown on the location plan in Annex.

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Search Criteria: 5NE-D/F1

Slope Maintenance Responsibility Report (5NE-D/R8)	ESTATE MANAGEMENT SECTION LANDS DEPARTMENT

List of Slope Maintenance Responsibility Area(s)

1	**5NE-D/R8**		**Sub-Division**	Not Applicable
	Location	WITHIN DD132 LOT 1744DRP IN KWONG SHAN TSUEN, TUEN MUN		
	Responsible Lot/Party	DD132 LOT 1744DRP	**Maintenance Agent**	Not Applicable
	Remarks	Not Applicable		

- End of Report -

Notes:

(i) The location plan in Annex is for identification purposes of slope(s) only.

(ii) The slope(s) as listed in the Slope Maintenance Responsibility Report may not be shown on the location plan in Annex.

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BASIC INFORMATION

Location: 150m Northwest of Po Tin Estate, Tuen Mun

Date of Construction/ Modification: Pre-1977

Approximate Coordinates: Easting : 814423 Northing : 830372

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Undeveloped green belt

Distance of Facility from Crest (m): 0

Facility at Toe: Residential

Distance of Facility from Toe (m): 5

Consequence-to-life Category: 1

Remarks: N/A

SLOPE PART

(1) Max. Height (m): 12.5 Length (m): 125 Average Angle (deg): 55

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Mixed Feature	Party: Lands D	Agent: Lands D
Mixed Feature	Party: DD132 LOT1744 I	Agent: N/A
Mixed Feature	Party: DD132 LOT1744 H	Agent: N/A
Mixed Feature	Party: DD132 LOT1744 F	Agent: N/A
Mixed Feature	Party: DD132 LOT1744 B	Agent: N/A
Mixed Feature	Party: DD132 LOT1744 C	Agent: N/A
Mixed Feature	Party: DD132 LOT1744 A	Agent: N/A

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 09-09-2010

Data Source: LPM

Slope Part Drainage:
(1) Position: Crest Size(mm): 375
(2) Position: Downpipe Size(mm): 300
(3) Position: On slope Size(mm): 375
(4) Position: Toe Size(mm): 375

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 67 Chunam: 0 Shotcrete: 33 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): 50 Spacing (m): 1.5

WALL PART

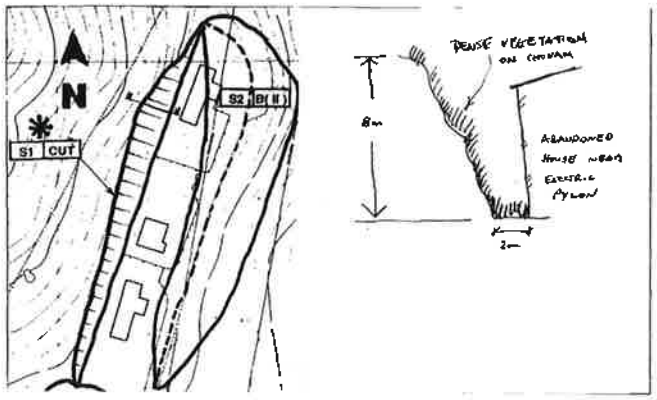
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SERVICES

N/A

STAGE 1 STUDY REPORT

Inspected On: 28-02-1997
Weather: Mainly Fine
District: MW



Section No: 1-1
Height(m): H1 : 8 , H2 : 0
Type of Toe Facility: Residential

Distance from Toe(m): 5
Type of Crest Facility: Undeveloped green belt

Distance from Crest(m): 0
Consequence Category: 3
Engineering Judgement: P

Section No: 2-2
Type of Toe Facility: N/A

Distance from Toe(m): 0
Type of Crest Facility: N/A

Distance from Crest(m): 0
Consequence Category: 3
Engineering Judgement: P

Sign of Seepage:	Slope : No signs of seepage Wall : N/A
Criterion A satisfied:	N
Sign of Distress:	Slope : Minor (near crest, mid-portion, at toe) Wall : N/A
Criterion D satisfied:	N
Non-routine maintenance required:	N
Note:	N/A
Masonry wall/Masonry facing:	N
Note:	N/A
Consequence category (for critical section):	3
Observations:	N/A
Emergency Action Required:	N
Action By:	N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D:	N/A
Action By:	N/A
Further Study:	Y
Action By:	Mixed

OTHER EXTERNAL ACTION

Check / repair Services:	N
Action By:	N/A
Non-routine Maintenance:	N
Action By:	N/A

BASIC INFORMATION

Location: 100 NORTHWEST OF HING TIN TEMPORARY HOUSING AREA.

Date of Construction/ Modification: Pre-1977

Approximate Coordinates: Easting : 814457 Northing : 830362

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Road/footpath with very low traffic density

Distance of Facility from Crest (m): 0

Facility at Toe: Undeveloped green belt

Distance of Facility from Toe (m): 0

Consequence-to-life Category: 3

Remarks: N/A

SLOPE PART

(1) Max. Height (m): 12 Length (m): 105 Average Angle (deg): 40

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Private Feature Party: DD132 LOT1744 A Agent: N/A
Private Feature Party: DD132 LOT1744 I Agent: N/A
Private Feature Party: DD132 LOT1744 RP Agent: N/A
Private Feature Party: DD132 LOT1744 G Agent: N/A
Private Feature Party: DD132 LOT1744 F Agent: N/A
Private Feature Party: DD132 LOT1744 E,RP Agent: N/A

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 28-02-1997
Data Source: SIRST
Slope Part Drainage: N/A

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 20 Vegetated: 80 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

N/A

SERVICES

N/A

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: MW

Section No: 1-1
Height(m):
Type of Toe Facility: Undeveloped green belt

Distance from Toe(m): 0
Type of Crest Facility: Road/footpath with very low traffic density

Distance from Crest(m): 0
Consequence Category:
Engineering Judgement:

Section No: 2-2
Type of Toe Facility:

Distance from Toe(m):
Type of Crest Facility:

Distance from Crest(m):
Consequence Category:
Engineering Judgement:

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:

Action By: N/A

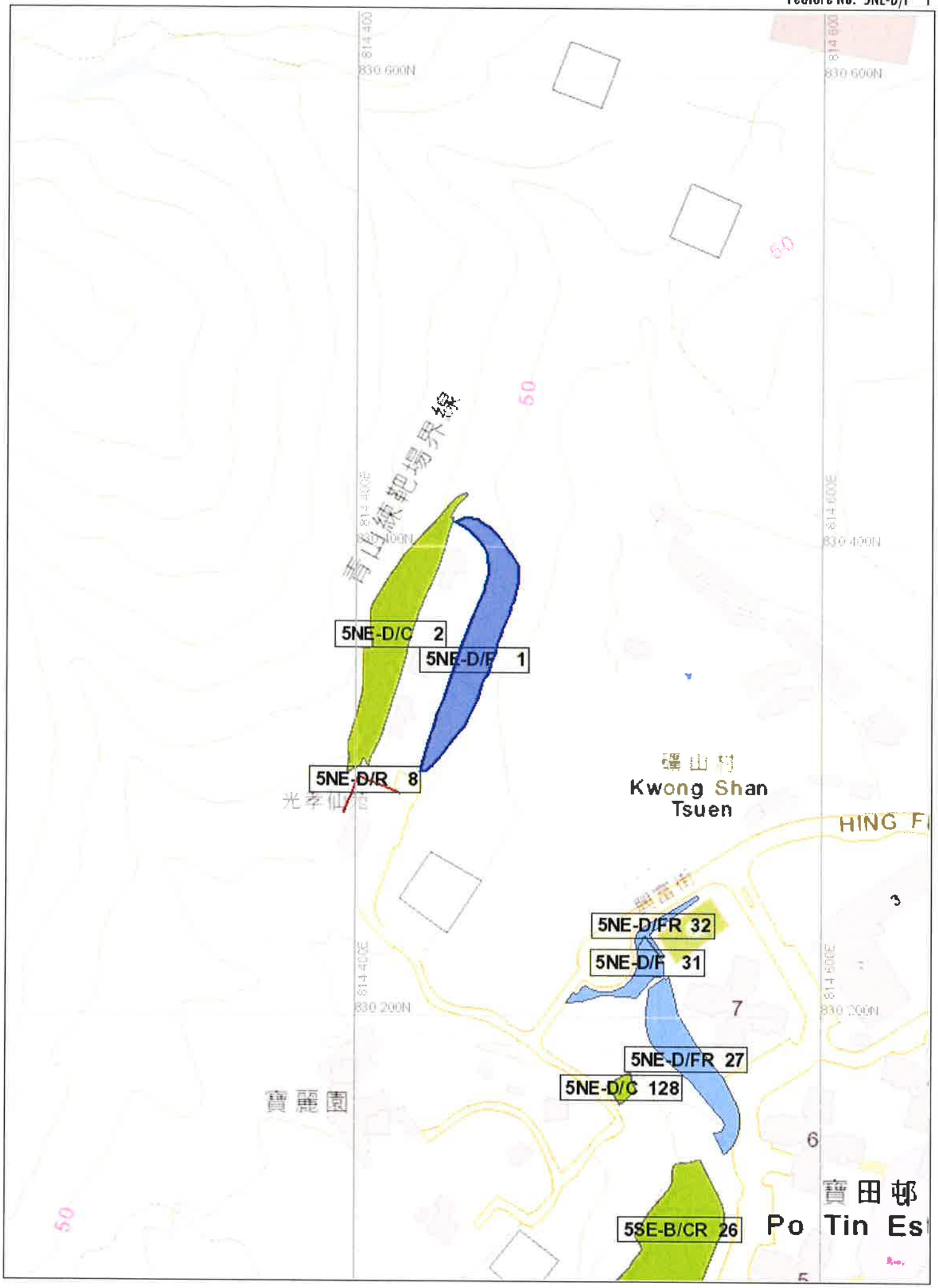
Non-routine Maintenance:

Action By: N/A

PHOTO






5NE-D/C 2
5NE-D/F 1
5NE-D/R 8
5NE-D/FR 32
5NE-D/F 31
5NE-D/FR 27
5NE-D/C 128
5SE-B/CR 26
Kwong Shan Tsuen
寶麗園
寶田邨
Po Tin Es
HING F
814 400
814 600
830 600N
830 400N
830 200N
50
7
6

BASIC INFORMATION

Location: Adjacent to Lot 1744 s.D RP in DD132, Kwong Shan Tsuen, Tuen Mun

Date of Construction/ Modification: Pre-1977

Approximate Coordinates: Easting : 814398 Northing : 830293

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Residential

Distance of Facility from Crest (m): 0.1

Facility at Toe: Residential

Distance of Facility from Toe (m): 0.1

Consequence-to-life Category: 1

Remarks: N/A

SLOPE PART

N/A

WALL PART

(1) Max. Height (m): 4.3 Length (m): 42 Face Angle (deg): 90

MAINTENANCE RESPONSIBILITY

Private Feature **Party: DD132 LOT 1744DRP** **Agent: N/A**

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 08-05-2012
Data Source: Districts
Slope Part Drainage: N/A

Wall Part Drainage: N/A

SLOPE PART

N/A

WALL PART

Wall Part (1)
Type of Wall: Wall Material: Masonry Wall Location: Retaining wall with level platform
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

SERVICES

N/A

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: N/A

Section No: 1-1
Height(m):
Type of Toe Facility: Residential

Distance from Toe(m): 0.1
Type of Crest Facility: Residential

Distance from Crest(m): 0.1
Consequence Category:
Engineering Judgement:

Section No: 2-2
Type of Toe Facility:

Distance from Toe(m):
Type of Crest Facility:

Distance from Crest(m):
Consequence Category:
Engineering Judgement:

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:

Action By: N/A

Non-routine Maintenance:

Action By: N/A

PHOTO














5NE-D/C 2
5NE-D/F 1
5NE-D/R 8
隆義室
TS
TS
PO
中國佛教總會
光孝仙苑
Road
道路
泥路
814 400E
830 250N
814 450E
830 300N
Pylon
Lower Arms
Powerline

BASIC INFORMATION

Location: Po Tin Estate

Date of Construction/ Modification: Pre-1977

Approximate Coordinates: Easting : 814531 Northing : 830239

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Road/footpath with low traffic density

Distance of Facility from Crest (m): 2

Facility at Toe: Densely-used playground

Distance of Facility from Toe (m): 0

Consequence-to-life Category: 2

Remarks: N/A

SLOPE PART

(1) Max. Height (m): 4.6 Length (m): 34 Average Angle (deg): 33

WALL PART

(1) Max. Height (m): 2.5 Length (m): 39 Face Angle (deg): 90

MAINTENANCE RESPONSIBILITY

Private Feature Party: TMTL485 Agent: N/A

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 14-09-2009
Data Source: Project Office
Slope Part Drainage: (1) Position: Crest Size(mm): 300

Wall Part Drainage: (1) Position: Crest Size(mm): 300
(2) Position: Toe Size(mm): 300

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

Wall Part (1)
Type of Wall: **Wall Material: Concrete** **Wall Location: Wall at toe**
Berm: **No. of Berms: N/A** **Min. Berm Width (m): N/A**
Weepholes: **Size (mm): 75** **Spacing (m): 1.2**

SERVICES

(1) **Utilities Type: Water Main** **Size(mm): 100** **Location: Crest** **Remark: N/A**

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: N/A

Section No: 1-1
Height(m):
Type of Toe Facility: Densely-used playground

Distance from Toe(m): 0
Type of Crest Facility: Road/footpath with low traffic density

Distance from Crest(m): 2
Consequence Category:
Engineering Judgement:

Section No: 2-2
Type of Toe Facility:

Distance from Toe(m):
Type of Crest Facility:

Distance from Crest(m):
Consequence Category:
Engineering Judgement:

Sign of Seepage:

Criterion A satisfied:
Sign of Distress:

Criterion D satisfied:
Non-routine maintenance required:
Note:

Masonry wall/Masonry facing:
Note:

Consequence category (for critical section):
Observations: N/A
Emergency Action Required:
Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A
Action By: N/A
Further Study:
Action By: N/A

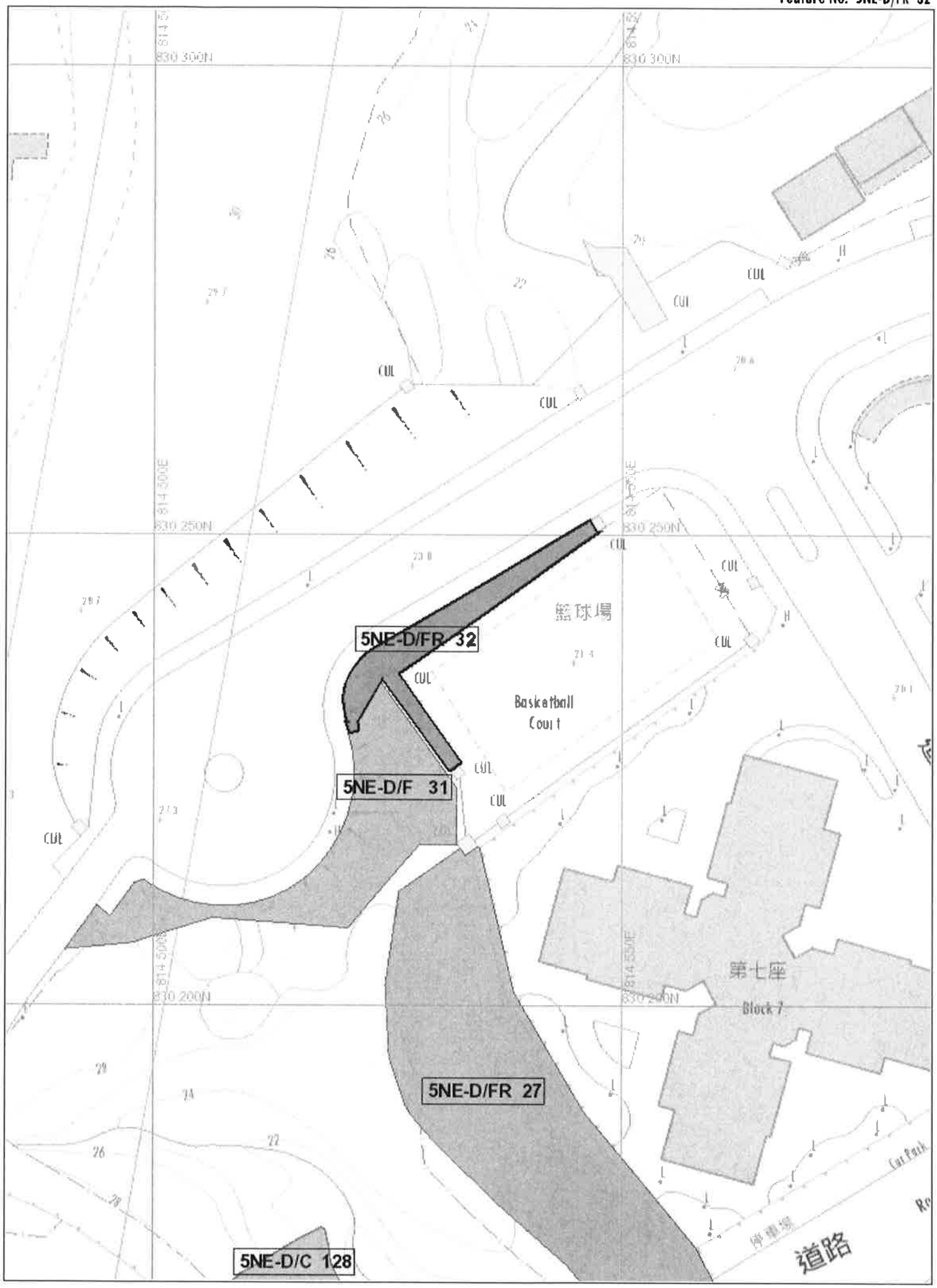
OTHER EXTERNAL ACTION

Check / repair Services:
Action By: N/A
Non-routine Maintenance:
Action By: N/A

PHOTO






5NE-D/FR 32
5NE-D/F 31
5NE-D/FR 27
5NE-D/C 128
Basketball Court
籃球場
第七座
Block 7
道路
814 300E
830 300N
830 250N
814 350E
830 200N
CUL

BASIC INFORMATION

Location: Po Tin Estate

Date of Construction/ Modification: Pre-1977

Approximate Coordinates: Easting : 814526 Northing : 830217

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Road/footpath with low traffic density

Distance of Facility from Crest (m): 0

Facility at Toe: Densely-used playground

Distance of Facility from Toe (m): 1

Consequence-to-life Category: 2

Remarks: N/A

SLOPE PART

(1) Max. Height (m): 5.1 Length (m): 56 Average Angle (deg): 33

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Government Feature Party: HyD Agent: HyD

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 04-09-2009
Data Source: Project Office
Slope Part Drainage: (1) Position: Crest Size(mm): 300
(2) Position: Toe Size(mm): 300

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

N/A

SERVICES

(1) Utilities Type: Water Main Size(mm): 100 Location: Crest Remark: N/A

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: N/A

Section No: 1-1
Height(m):
Type of Toe Facility: Densely-used playground

Distance from Toe(m): 1
Type of Crest Facility: Road/footpath with low traffic density

Distance from Crest(m): 0
Consequence Category:
Engineering Judgement:

Section No: 2-2
Type of Toe Facility:

Distance from Toe(m):
Type of Crest Facility:

Distance from Crest(m):
Consequence Category:
Engineering Judgement:

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:

Action By: N/A

Non-routine Maintenance:

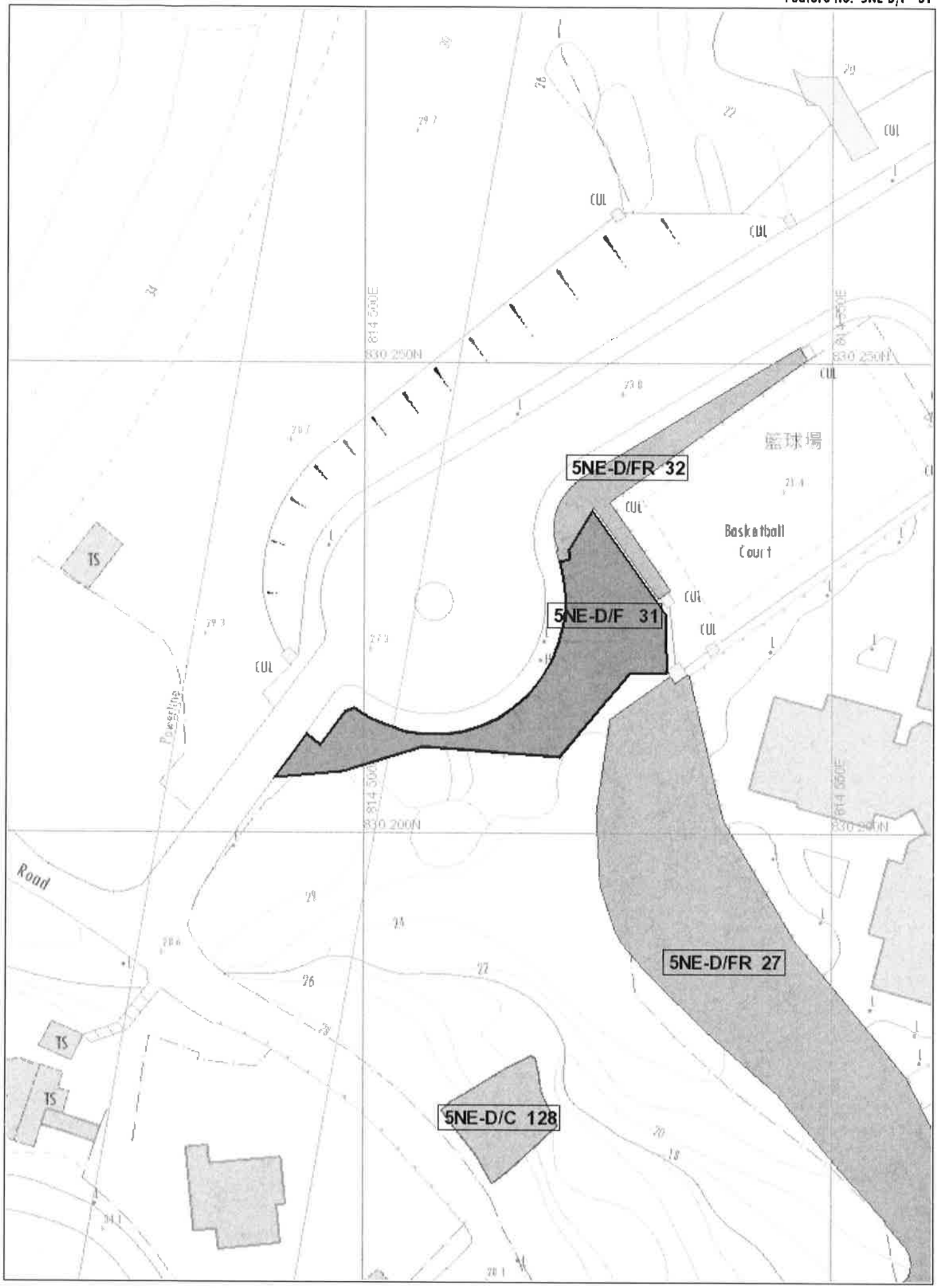
Action By: N/A

PHOTO








5NE-D/FR 32
5NE-D/F 31
5NE-D/FR 27
5NE-D/C 128
Basketball Court
籃球場
CUL
TS
Road
814 500E
830 250N
830 200N

BASIC INFORMATION

Location: Po Tin Estate

Date of Construction/ Modification: Post-1977

Approximate Coordinates: Easting : 814548 Northing : 830177

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Undeveloped green belt

Distance of Facility from Crest (m): 0

Facility at Toe: Residential

Distance of Facility from Toe (m): 3

Consequence-to-life Category: 1

Remarks: N/A

SLOPE PART

(1) Max. Height (m): 3.5 Length (m): 83 Average Angle (deg): 30

WALL PART

(1) Max. Height (m): 1.4 Length (m): 83 Face Angle (deg): 90

MAINTENANCE RESPONSIBILITY

Private Feature Party: TMTL 485 Agent: N/A

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 14-08-2009
Data Source: Project Office
Slope Part Drainage: (1) Position: On slope Size(mm): 375
(2) Position: Toe Size(mm): 600

Wall Part Drainage: (1) Position: Crest Size(mm): 300

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

Wall Part (1)
Type of Wall: Wall Material: Concrete Wall Location: Wall at toe
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): 65 Spacing (m): 1.2

SERVICES

N/A

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: MW

Section No: 1-1
Height(m):
Type of Toe Facility: Residential

Distance from Toe(m): 3
Type of Crest Facility: Undeveloped green belt

Distance from Crest(m): 0
Consequence Category:
Engineering Judgement:

Section No: 2-2
Type of Toe Facility:

Distance from Toe(m):
Type of Crest Facility:

Distance from Crest(m):
Consequence Category:
Engineering Judgement:

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:

Action By: N/A

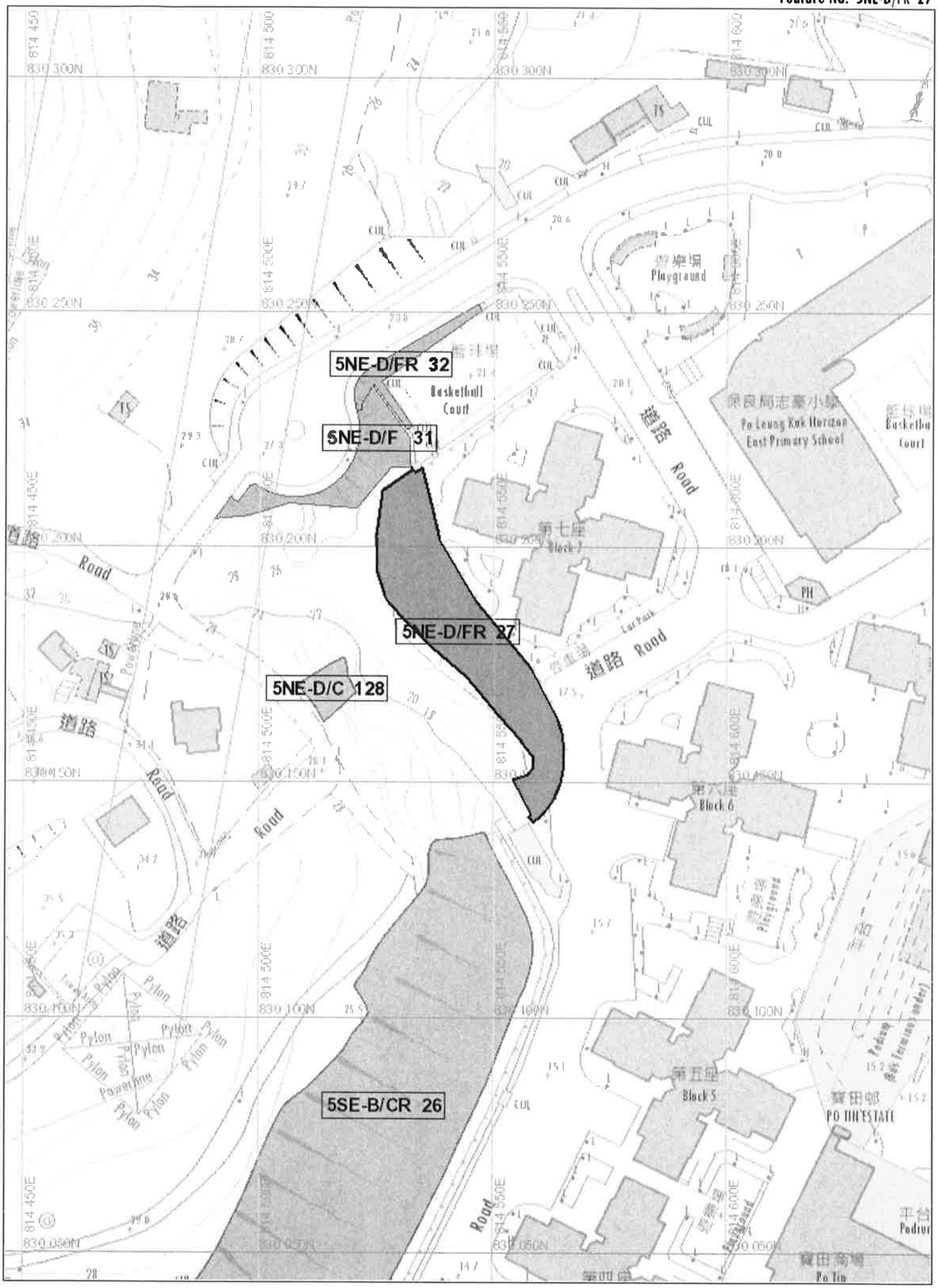
Non-routine Maintenance:

Action By: N/A

PHOTO






5NE-D/FR 32
5NE-D/F 31
5NE-D/FR 27
5NE-D/C 128
5SE-B/CR 26
Basketball Court
Playground
Po Leung Kuk Horizon East Primary School
Road
道路
Block 7
Block 6
Block 5
PH
Pylon

Previous Applications covering the Application Site

Approved Application

Application No.	Zoning	Development/Use	Date of Consideration	Approval Conditions
A/TM/147	"GB"	Residential Development	19.6.1992	(1) to (4)

Approval Conditions

(1) Submission and implementation of landscape proposal
(2) Provision of sewage treatment and disposal facilities
(3) Submission of site formation plans
(4) Provision of vehicular access with adequate intervisible passing bays

Rejected Application

Application No.	Proposed Amendment	Date of Consideration	Rejection Reasons
Y/TM/8	Rezoning from "GB" to "G/IC" for a Religious Institution and Columbarium	19.4.2013	(1) to (3)

Rejection Reasons

(1) Insufficient information to demonstrate that the proposed road widening was acceptable
(2) Insufficient information to demonstrate that the proposed development would not pose adverse vehicular and pedestrian traffic impacts and cause nuisance to the nearby residents during Ching Ming and Chung Yeung Festivals
(3) Undesirable precedent

屯門區議會
蘇嘉雯 議員
辦事處：屯門寶田邨第四座地下 8 號
電話：2461 9228

TUEN MUN DISTRICT COUNCIL
MEMBER **SO KA MAN**
Office: No. 8, G/F, Block 4, Po Tin Estate, Tuen Mun
Tel.: 2461 9228

城市規劃委員會
香港北角渣華道 333 號
北角政府合署 15 樓
傳真：2877 0245/2522 8426
電郵：tpbpd@pland.gov.hk

敬啓者：

有關：就申請編號 Y/TM/23 提供地區意見

本人收到本區居民關注天罡隆義將申請地點由「綠化地帶」改劃為「政府、機構或社區」地帶興建 11094 龕位。本人明白現時社會對龕位需求，但作為當區議員本人非常擔心以下問題，希望　貴委員會必須審慎考慮：

1) 由於興建 11094 龕位，擔心影響當區交通，尤其春秋祭祖高峰期。現時興富街及興貴街一帶經常有車輛違泊，若加上此計劃，相信現時道路無法負荷。建議此計劃須獨立通道與入口，不會影響現時居民。

2) 此申請地段不能進行打齋頌禮，無聲浪滋擾。

3) 化寶爐煙不能影響附近居民。

此規劃申請必須符合法定所有要求，絕不能違規，不能影響現時居民生活。

此致
城市規劃委員會所有委員

區議員辦事處 蘇嘉雯

蘇嘉雯區議員

2020 年 1 月 9 日

副件送：
規劃署屯門及元朗西規劃專員吳育民先生
（傳真：2489 9711　　電郵：dymng@pland.gov.hk）

就規劃申請/覆核提出意見 Making Comment on Planning Application / Review

參考編號 **Reference Number:**	200904-234753-62876
提交限期 **Deadline for submission:**	04/09/2020
提交日期及時間 **Date and time of submission:**	04/09/2020 23:47:53
有關的規劃申請編號 **The application no. to which the comment relates:**	Y/TM/23
「提意見人」姓名/名稱 **Name of person making this comment:**	女士 Ms. 何杏梅（屯門區議員）

意見詳情
Details of the Comment :

我反對此項申請，原因如下:
1.在該處設11094個骨灰龕位，帶來的人流及車流，會嚴重滋擾附近居民。
2.該處為綠化帶，不宜建骨灰龕場。
3.申請地點接近民居，骨灰龕位影響附近居民的心理。
4.申請計劃內只設12個車位，在春秋二祭時，因沒有足夠車位，會出現違例停泊的情況。
5.不應先破壞後申請。

K F B G
Kadoorie Farm & Botanic Garden
嘉道理農場暨植物園

嘉道理農場暨植物園公司
Kadoorie Farm & Botanic Garden Corporation

The Secretary,
Town Planning Board,
15/F, North Point Government Offices,
333, Java Road, North Point,
Hong Kong.
(Email: tpbpd@pland.gov.hk)

15th August, 2019. **By email only**

Dear Sir/ Madam,

To rezone the application site from "Green Belt" to "Government, Institution or Community" (Y/TM/23)

1. We refer to the captioned.

2. There is a rejected (i.e., not agreed) rezoning application (i.e., from "Green Belt" to "Government, Institution or Community" for a religious institution and columbarium; Y/TM/8; rejected in 2013) covering the current application site, and the reasons for rejection are reproduced below:

(a) *the proposed rezoning was for facilitating a columbarium development which includes a road widening proposal in the "Green Belt" ("GB") zone. The applicant had not provided sufficient information in the submission to demonstrate that the proposed road widening was acceptable and implementable and would not have adverse landscape impact;*

(b) *the applicant had not provided sufficient information in the submission to demonstrate that the proposed development would not pose adverse vehicular and pedestrian traffic impacts and cause nuisance to the nearby residents during the Ching Ming and Chung Yeung Festivals; and*

(c) *approval of the application would set an undesirable precedent for other similar applications within the "GB" zone.*

香港新界大埔林錦公路
Lam Kam Road, Tai Po, New Territories, Hong Kong
Email: eap@kfbg.org

3. We urge the Board to reject this application as GB zone should not be opened for development; approval of this application would also set a precedent for other similar applications and we urge the Board to seriously consider the potential cumulative impacts.

4. Thank you for your attention.

Ecological Advisory Programme
Kadoorie Farm and Botanic Garden

嘉道理農場暨植物園公司
Kadoorie Farm & Botanic Garden Corporation

The Secretary,
Town Planning Board,
15/F, North Point Government Offices,
333, Java Road, North Point,
Hong Kong.
(Email: tpbpd@pland.gov.hk)

3rd September, 2020. **By email only**

Dear Sir/ Madam,

To rezone the application site from "Green Belt" to "Government, Institution or Community" (Y/TM/23)

1. We refer to the captioned.

2. There is a rejected rezoning application for similar purpose (Y/TM/8; Rezoning from "Green Belt" to "Government, Institution or Community" for a Religious Institution and Columbarium) covering the current application site; the reasons for rejection are reproduced as follows:

(a) *the proposed rezoning was for facilitating a columbarium development which includes a road widening proposal in the "Green Belt" ("GB") zone. The applicant had not provided sufficient information in the submission to demonstrate that the proposed road widening was acceptable and implementable and would not have adverse landscape impact;*

(b) *the applicant had not provided sufficient information in the submission to demonstrate that the proposed development would not pose adverse vehicular and pedestrian traffic impacts and cause nuisance to the nearby residents during the Ching Ming and Chung Yeung Festivals; and*

(c) *approval of the application would set an undesirable precedent for other similar applications within the "GB" zone.*

香港新界大埔林錦公路
Lam Kam Road, Tai Po, New Territories, Hong Kong
Email: eap@kfbg.org

3. We urge the Board to consider the potential cumulative impacts on the Green Belt (GB) zone of approving this application as the approval will set a precedent for other similar applications within this GB zone.

4. Thank you for your attention.

Ecological Advisory Programme
Kadoorie Farm and Botanic Garden

K F B G
Kadoorie Farm & Botanic Garden
嘉道理農場暨植物園

嘉道理農場暨植物園公司
Kadoorie Farm & Botanic Garden Corporation

The Secretary,
Town Planning Board,
15/F, North Point Government Offices,
333, Java Road, North Point,
Hong Kong.
(Email: tpbpd@pland.gov.hk)

29th April, 2021.

By email only

Dear Sir/ Madam,

To rezone the application site from "Green Belt" to "Government, Institution or Community"
(Y/TM/23)

To rezone the application site from "Green Belt" to "Government, Institution or Community"
(Y/TM/24)

To rezone the application site from "Green Belt" to "Government, Institution or Community"
Y/TM/26

1. We refer to the captioned.

2. We urge the Board to consider all potential impacts that would be associated with the proposal and also the potential cumulative impacts of approving any of these applications on the Green Belt (GB) zone as the approval would set precedent(s) for other similar cases in this GB.

3. Thank you for your attention.

Ecological Advisory Programme
Kadoorie Farm and Botanic Garden

香港新界大埔林錦公路
Lam Kam Road, Tai Po, New Territories, Hong Kong
Email: eap@kfbg.org

各界關注骨灰龕法案大聯盟
ALLIANCE FOR THE CONCERN OVER COLUMBARIUM POLICY

致：城規會秘書處

有關：反對 Y/TM/23 擬把申請地點由「綠化地帶」改劃為「政府、機構或社區」地帶

各界關注骨灰龕法案大聯盟反對上述申請，理由如下：

1. 有關項目曾於 2012 年已提出改劃申請，申請編號為 Y/TM/8，最後被城規會於 2013 年 4 月 19 日第 496 次會議中否決。部門的反對意見包括：

(i)「綠化地帶」的規劃意向及土地用途協調性
該概括的「綠化地帶」的規劃意向，是利用天然地理環境作為市區和近郊的發展區的界限，以抑制市區範圍的擴展，並提供土地作靜態康樂場地。雖然「宗教機構」(廟宇)未必與附近的土地用途不相協調，但靈灰安置所的可接受程度仍須因應整體環境及技術上的考慮而作出全面評估；

(ii)景觀影響
規劃署總城市規劃師／城市設計及園境從景觀規劃的角度而言，對申請有所保留。有關的「綠化地帶」屬於密林山坡，是附近鄉村與市區式發展之間的天然綠化緩衝區。不過，現有的景觀資源和特色曾受到重大干擾。批准申請會令該區有更多同類申請，損害「綠化地帶」的完整性。現時亦沒有足夠資料顯示擬議道路工程不會對景觀造成負面影響；

(iii) 漁農自然護理署：生境質素下降
漁農自然護理署署長(下稱「漁護署署長」)認為批准申請或會為違例的靈灰安置所發展立下不良先例，令該區的生境質素下降；

(iv)運輸署
擬議穿梭巴士服務須獲得運輸署署長的批准，當局不保證擬議非專營巴士服務必會獲得批准。實施穿梭巴士服務未必能制止敬拜者使用私人及公共交通工具前往申請地點。擬議應變計劃的推行取決於擴闊通道工程，但該項擴闊道路建議可否落實令人懷疑。此外，亦有意見關注行人安全及非法泊車的問題。提供 6 000 個骨灰龕的擬議靈灰安置所預計會引來大量車流及人流。運輸署署長認為須就車流及人流進行定量評估。他對於申請人在評估累積的交通影響時，假設交通流量將會減少一點有所保留；

(v) 地政總署屯門地政專員表示，擬議靈灰安置所發展項目違反現有契約條例，已被釘契。

(vi) 警務處處長(屯門區指揮官)關注「訪客預約制度」能否發揮成效，以及訪客在節日期間非法泊車造成阻塞的潛在風險。申請地點位於興富街的盡頭路末端，沒有足夠的公共設施(例如泊車位及行人道)，以容納大量人羣。即使有穿梭巴士服務，亦不能制止敬拜者使用私人及公共交通工具前往申請地點，這樣可能令興富街的交通更為擠塞；

(vii)滋擾
有關的靈灰孜置所與寶田邨共用通道(即興富街)。為前往靈灰孜置所，訪客可能會行經寶田邨，對居民造成滋擾；以及申請地點毗鄰有違例的靈灰安置所光孝先苑。批准有問題尚未解決的申請會立下不良先例。

2. 申請在 2013 年 7 月再次提出申請，最後主動撤回，至 2019 年 7 月再次提交申請。申請人未獲城規會批准下，違規繼續經營骨灰龕場，完全漠視各部門對有關項目的反對意見違規營運。

3. 大聯盟希望委員留意申請項目的骨灰龕位數量的轉變

	類別	總數
Y/TM/8	4,000 個單位骨灰龕 2,000 個雙位骨灰龕	6,000 骨灰龕
Y/TM/13	5,000 個單位骨灰龕	5,000 骨灰龕
Y/TM/23	11,094 骨灰龕位	11,094 骨灰龕位

Y/TM/23 的申請龕位數量較首次申請多出接受兩倍，其對環境、社區、交通等影響只會更加惡化，因此，城規會無理由否定龕位較少時作出否決的定斷，違反審批準則的一致性。

4. 特別一提，申請人在今次申請時提交了一份警務署對申請人向私營骨灰安置所申請牌照時提交的管理方案的意見，表格中反映警務署表示管理方案可以接受，而警務處不反對發出牌照。大聯盟質疑警務署的意見為何於 2013 年提出上述第(vi)的反對意見不一致。申請數量較 Y/TM/8 超出接近兩倍，管理措施沒有大的分別，為何警務署的意見可以昨非今是的呢?

5. 申請人提出會安排穿梳巴士接載，但運輸署於 2013 年的文件中表示不保證擬議非專營巴士服務必會獲得批准。實施穿梭巴士服務未必能制止敬拜者使用私人及公共交通工具前往申請地點。

6. 申請人在管理方案中提及在人流管理方面，會考慮聘請醫療輔助隊協助。大聯盟指出醫療輔助隊只會提供公共服務，不會受聘於私人項目。

7. 申請人聲稱骨灰安置所的需求甚殷，但食環署已經作出規劃，未來十年有幾十萬龕位可提供先人安息之用。屯門曾咀的 16 萬龕位已於去年落成，並續年分批供市民購買，北區和合石骨灰安置所(第六期)亦於今年落成，今年第二季開始接受申請。此外，食環署近年來推動綠色殯葬的工作漸見成果，二〇一八年食環署處理的綠色殯葬宗數佔全港死亡總人數約 13.3%（相對二〇一〇年的 4.6%）。若連同私營墳場處理的綠色殯葬宗數一併計算，二〇一八年綠色殯葬宗數佔同年死亡總人數約 14.8%。[1]反映市民對龕位的需要日漸減少。

8. 另一方面，屯門已有幾個龕場獲城規會批准改變土地用途，包括：思親公園、善緣、佛緣精舍、青松仙苑等，合共的龕位數量數以萬計，當中思親公園及善緣已獲城規會發出牌照。加上屯門仍有不少違規龕場會向城規會申請改變土地用途，因此，城規會必須把關，不要定下不良先例，令違規龕場有機可乘，對屯門的人流車流及環境做成嚴重滋擾。

基於以上原因，各界關注骨灰龕法案大聯盟強烈反對 Y/TM/23 擬把地點由「綠化地帶」改劃為「政府、機構或社區」地帶的申請。

各界關注骨灰龕法案大聯盟
2020.01.10

[1] https://www.info.gov.hk/gia/general/201904/17/P2019041700379.htm

創建 DesigningHongKong 香港 .com

10th January, 2020
Chairman and Members
Town Planning Board
15/F, North Point Government Offices
333 Java Road, North Point, Hong Kong
Fax: 2877 0245;
Email: tpbpd@pland.gov.hk

Re: To rezone the application site from "Green Belt" to "Government, Institution or Community" (Application No. Y/TM/23)

Dear Chairman and Members,

Designing Hong Kong Limited **objects** the captioned for the following reasons:

- The proposed area zoned as **"Green Belt (GB)"**. The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets.

- It is noted that a columbarium application (Application No. Y/TM/8) was **rejected** by the Board on 19th April 2013 with the following reasons:

  "(a) the proposed rezoning was for facilitating a columbarium development which includes a road widening proposal in the "Green Belt" ("GB") zone. The applicant had not provided sufficient information in the submission to demonstrate that the proposed road widening was acceptable and implementable and would not have adverse landscape impact".

- According to the update from the Development Bureau on 29th March 2018[1], **columburium use is not permitted** under the lease on the proposed site. However, the columbarium has been operating for almost a decade. We concern the Town Planning Board may be rewarding an unauthorized use of land by approving the captioned application.

- As the location as well as the road network connected to the columbarium, we concern the approval may bring **adverse traffic impact** to the surrounding area, especially during the Ching Ming Festival and Chung Yeung Festival.

- Approval of the application would set an undesirable precedent for other similar applications within the "GB" zone and lead to a general degradation of the rural environment of the area.

Here we submit our concerns for your consideration.

Yours,
Designing Hong Kong Limited

[1] https://www.devb.gov.hk/filemanager/en/content_756/Columbarium_List_20180329.pdf

21/F, Chun Wo Commercial Centre, 25 Wing Wo Street, Central, Hong Kong
Tel: +852 3014 2767 Fax: +852 2187 2305 Email: info@designinghongkong.com

tpbpd@pland.gov.hk

寄件者: [redacted]
寄件日期: 2020年01月10日星期五 21:06
收件者: tpbpd
主旨: Y/TM/23 DD 132 Hing Fu Street, Columbarium

Y/TM/23 (8)
Lots 1744 S.A, 1744 S.B, 1744 S.C, 1744 S.F, 1744 S.G, 1744 S.H and 1744 S.I in D.D. 132, Hing Fu Street, Tuen Mun
Site area : About 3,137sq.m (3,172.00m²)
Zoning : "Green Belt"
Proposed Amendment(s) : Rezone to GIC / 11,094 Niches (6,000) / 16 (7) Vehicle Parking

Dear TPB Members,

Application 8 rejected 19 April 2013 but Applicant is back and now looking to double his money.

Some relevant extracts from the minutes:

As the **subject columbarium contravened the lease conditions**, LandsD might take lease enforcement action against the unauthorized development.

A Member referred to Plan Z-3 of the Paper and said that the site should remain as a "GB" site as it was mainly covered with natural vegetation in 2008. **Efforts should be made to reinstate the site to its original conditions.**

The proposed road widening scheme might also affect the existing slopes and the existing graves on Government land.

Commissioner for Transport (C for T) commented that with regard to the widening of the access road, the **gradient of the ramp was too steep** and was undesirable for the safe operation of private buses. The **proposed footpath/staircase was not barrier-free and could not be assessed by wheelchair users.** The proposed columbarium was expected to attract a great amount of traffic and pedestrian flow.

Strong community opposition - during the first three weeks of the statutory public inspection period, a total of 920 public comments were received. While ten commenters supported the application, 907 commenters objected to the application. On round two 281 public comments were received. All of them objected to the application.

But now Applicant says double the number of niches will not result in any significant impact on land use, traffic, landscape, environment, etc??

Also note that when Application 8 was made Applicant stated that:

144 niches were already sold and 77 of them were already occupied (this despite the fact that it was an unauthorized facility). Application was for 6,000 niches.

But now he says that 11,094 niches sold and unsold before 30 June 2017??

Obviously something does not add up here.

5 - 40

Will members reward 'Destroy to Build' and manipulation of data with an approval?

Mary Mulvihill

就規劃申請/覆核提出意見 Making Comment on Planning Application / Review

參考編號 **Reference Number:**	200109-170320-55493
提交限期 **Deadline for submission:**	10/01/2020
提交日期及時間 **Date and time of submission:**	09/01/2020 17:03:20
有關的規劃申請編號 **The application no. to which the comment relates:**	Y/TM/23
「提意見人」姓名/名稱 **Name of person making this comment:**	小姐 Miss Candy Ho

意見詳情
Details of the Comment :

本人是屯門建生邨居民，本人反對有關申請。大量龕位供應會帶來大量人流和車流，特別是在重陽清明等節日，會對附近交通帶來影響並影響居民生活。另外該用地為綠化用地，設立骨灰龕位並不符合該用地的規劃意圖，並會進一步影響附近的自然環境，因此本人提出反對。

Seq 5

328

致城市規劃委員會秘書：
專人送遞或郵遞:香港北角渣華道 333 號北角政府合署 15 樓
傳真 : 2877 0245 或 2522 8426
電郵: tpbpd@pland.gov.hk

To : Secretary, Town Planning Board
By hand or post : 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax : 2877 0245 or 2522 8426
By e-mail : tpbpd@pland.gov.hk

有關的規劃申請編號 **The application no. to which the comment relates**
Y/TM/23 Received on 31/03/2021

意見詳情 (如有需要，請另頁說明)
Details of the Comment (use separate sheet if necessary)

不同意。私人車輛用途。

「提意見人」姓名/名稱 Name of person/company making this comment MA KBB

簽署 Signature _____ 日期 Date 14/4/2021

申請編號：Y/TM/23

致：城市規劃委員會
香港北角渣華道 333 號
北角政府合署 15 樓

有關屯門天罡隆義(丈量約份第132地段1744號A、B、C、F、G、H、I) S.12A更改用途區申請

本人得知天罡隆義向貴會申請骨灰龕規範化，因此特意寫信支持，原因如下：

1. 私營骨灰安置所條例在2017年6月30日正式生效，將現有私營靈灰安置所加以改善，加強了居民及消費者安心；據了解，天罡隆義已向私營骨灰安置所發牌委員會提交牌照申請；
2. 天罡隆義擁有優良團隊管理安置所以確保不會對附近居民做成影響；
3. 天罡隆義環境清靜，被不少大樹及斜坡包圍，作視覺屏障，而天罡隆義亦與鄰近民居相隔一段距離，因此十分適合用作靈灰安置所；
4. 天罡隆義內提供足夠交通和傷殘設備，及將連接地盤和興富街迴旋處的道路進行改善，受工程影響的樹木會作出合理補償；
5. 天罡隆義將實施交通及人流規劃方案，將春秋二祭的人流妥善地控制，減少對附近交通及民居的影響；
6. 天罡隆義內並禁止任何燃燒冥鏹活動，因此並不會造成空氣污染問題。

綜合上述各點，本人盼望政府尊盡快批准上述申請，同時部份解決現時香港嚴重缺乏骨灰位需求，令市民安心。

姓名: 楊江 屯門商會會長

簽署:

日期: 21.08.2019

Tuen Mun Merchants Association Limited 屯門商會有限公司

RECEIVED
- 9 JAN 2020
Town Planning Board

申請編號：Y/TM/23

致：城市規劃委員會
香港北角渣華道 333 號
北角政府合署 15 樓

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2. 天罡隆義擁有優良團隊管理安置所以確保不會對附近居民做成影響；
3. 天罡隆義環境清靜，被不少大樹及斜坡包圍，作視覺屏障，而天罡隆義亦與鄰近民居相隔一段距離，因此十分適合用作靈灰安置所；
4. 天罡隆義內提供足夠交通和傷殘設備，及將連接地盤和興富街迴旋處的道路進行改善，受工程影響的樹木會作出合理補償；
5. 天罡隆義將實施交通及人流規劃方案，將春秋二祭的人流妥善地控制，減少對附近交通及民居的影響；
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綜合上述各點，本人盼望政府尊盡快批准上述申請，同時部份解決現時香港嚴重缺乏骨灰位需求，令市民安心。

姓名: CHAN KWONG YU 屯門商會主席

簽署: _____

日期: 21/08/2019

屯門商會有限公司 Tuen Mun Merchants Association Limited

RECEIVED
- 9 JAN 2020
Town Planning Board

申請編號：Y/TM/23

致：城市規劃委員會
香港北角渣華道 333 號
北角政府合署 15 樓

有關屯門天罡隆義(丈量約份第132地段1744號A、B、C、F、G、H、I) S.12A更改用途區申請

本人得知天罡隆義向貴會申請骨灰龕規範化，因此特意寫信支持，原因如下：

1. 私營骨灰安置所條例在2017年6月30日正式生效，將現有私營靈灰安置所加以改善，加強了居民及消費者安心；據了解，天罡隆義已向私營骨灰安置所發牌委員會提交牌照申請；

2. 天罡隆義擁有優良團隊管理安置所以確保不會對附近居民做成影響；

3. 天罡隆義環境清靜，被不少大樹及斜坡包圍，作視覺屏障，而天罡隆義亦與鄰近民居相隔一段距離，因此十分適合用作靈灰安置所；

4. 天罡隆義內提供足夠交通和傷殘設備，及將連接地盤和興富街迴旋處的道路進行改善，受工程影響的樹木會作出合理補償；

5. 天罡隆義將實施交通及人流規劃方案，將春秋二祭的人流妥善地控制，減少對附近交通及民居的影響；

6. 天罡隆義內並禁止任何燃燒冥鏹活動，因此並不會造成空氣污染問題。

綜合上述各點，本人盼望政府尊盡快批准上述申請，同時部份解決現時香港嚴重缺乏骨灰位需求，令市民安心。

姓名: Cheng Siu Ling

簽署: Elaine

日期: 12-8-2019

RECEIVED
16 AUG 2019
Town Planning Board

申請編號：Y/TM/23

致：城市規劃委員會
香港北角渣華道 333 號
北角政府合署 15 樓

有關屯門天罡隆義(丈量約份第 132 地段 1744 號 A、B、C、F、G、H、I) S.12A 更改用途區申請

本人得知天罡隆義向貴會提交補充資料報告書，以積極完善申請計劃及解決問題，因此特意寫信支持，原因如下：

1. 地盤位於半山平台上及鄰近宗教團體和墓地，因此適合作宗教及靈灰安置所用途
2. 天罡隆義承諾提供優良管理團隊，以確保不會對附近居民造成影響；
3. 申請人因應運輸署要求將停車位增加，並實施交通及人流規劃方案，將春秋二祭的訪客妥善地控制，減少對附近交通及民居的影響；
4. 申請人提供了補充資料以回應部門對先例的問題；
5. 天罡隆義內禁止任何燃燒冥鏹活動，因此不會造成空氣污染問題。

綜合上述各點，本人盼望政府盡快批准上述申請，同時部份解決現時香港嚴重缺乏骨灰位需求，令市民安心。

姓名: 蘇偉琪

簽署: 

日期: 28-08-2020

RECEIVED
- 5 FEB 2021
Town Planning Board

申請編號：Y/TM/23

敬啟者：

有關：申請人: 屯門天罡隆義有限公司
(丈量約份第 132 地段 1744 號 A、 B、 C、 F、 G、 H、I)
S.12A 更改用途申請

本人得知,天罡隆義有限公司現向 貴會提交上述申請，本人對該申請表示支持，因為：-

1. 地盤位於半山礦山村平台上及鄰近宗教團體和墓地，是較為適合作宗教及靈灰安置所用途；

2. 據悉天罡隆義承諾了提供優良管理團隊，以確保其運作不會對附近居民造成負面影響；

3. 據資料顯示其提交的交通評估似乎已經考慮了附近可能有的龕場的交通流量，並建議必須時在清明節和重陽節以及節日周末關閉，相信不會產生交通問題；

4. 申請人似乎已提供了一切所需補充資料以回應各部門對造成先例的問題；及

5. 天罡隆義照我們公眾所知，是禁止任何燃燒冥鏹活動，相信不會造成空氣或環境污染問題; 而

6. 我們公眾及有需要人士正急切期待私人龕位的開放及供應。

綜合上述各點，本人盼望政府盡快批准上述申請，同時盡快部份解決現時香港嚴重缺乏骨灰位需求，以應市民所需及令市民安心。

此致
城市規劃委員會
香港北角渣華道 333 號
北角政府合署 15 樓

姓名: 羅樹基
簽署:
日期: 4-2-2021