From: sun wo wong
Sent: Monday, August 5, 2024 9:46 PM
To: Katie Yuet Yee LEUNG/PLAND <kyyleung@pland.gov.hk>; tpbpd/PLAND <tpbpd@pland.gov.hk>
Subject: Y/NE-STK/5

現付上新一份交通評估報告書，
管理方案，及永不重建及增加
灰位承諾書。

致 城市規劃委員會

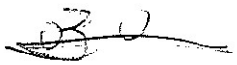
申請編號 ：Y/NE-STK/5

我等在上次申請時(Y/NE-STK/3)有委員曾經提及我等申請地點日後會否增加骨灰位及重建現有的安置所，現以此函作出書面保證，絕對不會申請增加骨灰位的數目(現有骨灰位總數為 864 個)及重建現有骨灰安置所。

如有須要時我等只會進行維修和保養的工作。

特以此函作出聲明。

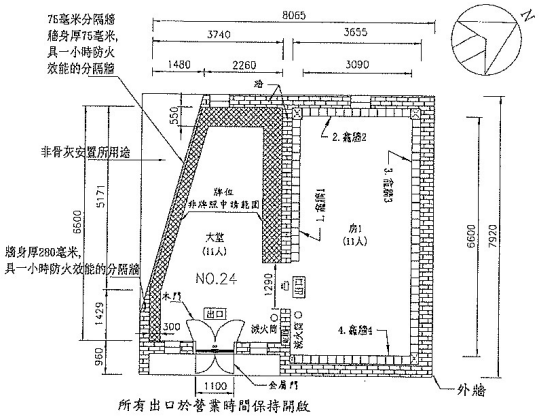
申請人　張健龍　敬上



代理人黃新和簽署

05-08-2024

建議樓面平面圖 就截算前骨灰安置所的牌照申請



所有出口於營業時間保持開啟

(按公制比例繪製) 1:100

建議骨灰安置所大樓樓面平面圖(圖則編號003)

圖例

分隔牆(75毫米厚)
金屬架兩邊嵌上M09防火板以達1小時防火效能)

非骨灰龕位用途

備注:

1. 日後牌照申請範圍如有任何改動均不會影響延遠非牌照申請範圍(包括屋頂)的安全及完整性。
2. 骨灰安置所及其毗連非申請範圍(大堂及牌位位置)須由同一申請人進行管理及控制。

骨灰安置所名稱: 自由福居

地址: 新界沙頭角鹿頸肚坪村24號
(丈量約份第41約地段第1423號B分段(部分))

房1及大堂面積計算:

1. 房1: (3.090米X6.6米) = 20.394平方米
2. 大堂: (3.740米x6.6米) = 24.684平方米
-(1.525米x6.2米)X1/2 = 3.965平方米
= 20.719平方米

1. 龕牆1 12(橫排) X 17(直排)=204個龕位
2. 龕牆2 12(橫排) X 13(直排)=156個龕位
3. 龕牆3 12(橫排) X 28(直排)=336個龕位
4. 龕牆4 12(橫排) X 14(直排)=168個龕位
合共龕位總數=864個龕位

根據<<2011年消防安全守則>>的表B1內5(d)項, 可容納人數計算表

樓層	類別	房名	佔用面積	可用面積	可容納人數
地下	骨灰安置所	房1	2平方米/人	20.394平方米	11
	骨灰安置所	大堂	2平方米/人	20.719平方米	11
				合共地下可容納人數	22<30

逃生出口規格表

樓層	合共容納人數	最少逃生路線數目		每個最少闊度(毫米)					
				逃生門		逃生路線		逃生門	逃生路線
		要求	供給	要求	供給	要求	供給	要求	要求	供給	要求	供給
地下	22	1	1	–	–	–	–	750	1100	1050	1100

龕牆1龕位編號:
AA101-AA108及BA101-BA104
AA201-AA208及BA201-BA204
AA301-AA308及BA301-BA304
AA401-AA408及BA401-BA404
AA501-AA508及BA501-BA504
AA601-AA608及BA601-BA604
AA701-AA708及BA701-BA704
AA801-AA808及BA801-BA804
AA901-AA908及BA901-BA904
AA1001-AA1008及BA1001-BA1004
AA1101-AA1108及BA1101-BA1104
AA1201-AA1208及BA1201-BA1204
AA1301-AA1308及BA1301-BA1304
AA1401-AA1408及BA1401-BA1404
AA1501-AA1508及BA1501-BA1504
AA1601-AA1608及BA1601-BA1604
AA1701-AA1708及BA1701-BA1704

龕牆2龕位編號:
AB101-AB108及BB101-BB104
AB201-AB208及BB201-BB204
AB301-AB308及BB301-BB304
AB401-AB408及BB401-BB404
AB501-AB508及BB501-BB504
AB601-AB608及BB601-BB604
AB701-AB708及BB701-BB704
AB801-AB808及BB801-BB804
AB901-AB908及BB901-BB904
AB1001-AB1008及BB1001-BB1004
AB1101-AB1108及BB1101-BB1104
AB1201-AB1208及BB1201-BB1204
AB1301-AB1308及BB1301-BB1304

龕牆3龕位編號:
AC101-AC108及BC101-BC104
AC201-AC208及BC201-BC204
AC301-AC308及BC301-BC304
AC401-AC408及BC401-BC404
AC501-AC508及BC501-BC504
AC601-AC608及BC601-BC604
AC701-AC708及BC701-BC704
AC801-AC808及BC801-BC804
AC901-AC908及BC901-BC904
AC1001-AC1008及BC1001-BC1004
AC1101-AC1108及BC1101-BC1104
AC1201-AC1208及BC1201-BC1204
AC1301-AC1308及BC1301-BC1304
AC1401-AC1408及BC1401-BC1404
AC1501-AC1508及BC1501-BC1504
AC1601-AC1608及BC1601-BC1604
AC1701-AC1708及BC1701-BC1704
AC1801-AC1808及BC1801-BC1804
AC1901-AC1908及BC1901-BC1904
AC2001-AC2008及BC2001-BC2004
AC2101-AC2108及BC2101-BC2104
AC2201-AC2208及BC2201-BC2204
AC2301-AC2308及BC2301-BC2304
AC2401-AC2408及BC2401-BC2404
AC2501-AC2508及BC2501-BC2504
AC2601-AC2608及BC2601-BC2604
AC2701-AC2708及BC2701-BC2704
AC2801-AC2808及BC2801-BC2804

龕牆4龕位編號:
AD101-AD108及BD101-BD104
AD201-AD208及BD201-BD204
AD301-AD308及BD301-BD304
AD401-AD408及BD401-BD404
AD501-AD508及BD501-BD504
AD601-AD608及BD601-BD604
AD701-AD708及BD701-BD704
AD801-AD808及BD801-BD804
AD901-AD908及BD901-BD904
AD1001-AD1008及BD1001-BD1004
AD1101-AD1108及BD1101-BD1104
AD1201-AD1208及BD1201-BD1204
AD1301-AD1308及BD1301-BD1304
AD1401-AD1408及BD1401-BD1404

20-6-2023
日期 (日/月/年)

張健龍
申請人(如屬自然人)/~~獲授權人士~~/~~獲授權合夥人~~*姓名及簽署

香港身份證號碼/~~旅遊證件號碼~~*

法人團體/合夥*印章(如適用)

RECEIVED
20 JUN 2023
Private Columbaria Affairs Office
FEHD

20-6-2023
日期 (日/月/年)

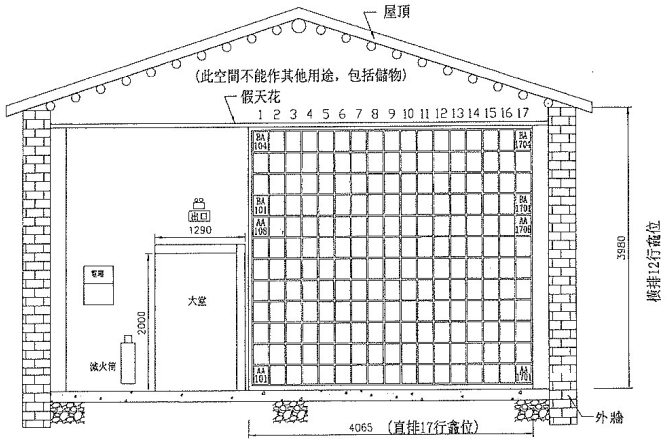
譚梓森
認可人士/~~註冊結構工程師~~* 簽署和姓名
(認可人士/註冊結構工程師根據《建築物條例》(第123章)第3條註冊的人士)

註冊編號#: AP(E)2096/63

註冊有效期屆滿日期#: 31/12/2025

 # 須與《建築物條例》(第123章)第3條所指的名冊相符
** 刪去不適用者*

建議樓面平面圖 就截算前骨灰安置所的牌照申請



(按公制比例繪製) 1:50

龕牆1 建議骨灰安置所大樓樓面立面圖（圖則編號003A)

骨灰安置所名稱：自由福居

地址：新界沙頭角塘肚坪村24號
(丈量約份第41約地段第1423號B分段(部分))

20-6-2023
日期 (日 / 月 / 年)

張健龍
中請人(如屬自然人) / 獲授權人士 / 獲授權合夥人*姓名及簽署

香港身份證號碼 / ~~旅遊證件號碼~~*

法人團體 / 合夥*印章(如適用)

20-6-2023
日期 (日 / 月 / 年)

譚梓森
認可人士/註冊結構工程師* 簽署和姓名
(認可人士/註冊結構工程師指根據《建築物條例》(第123章)第3條註冊的人士)

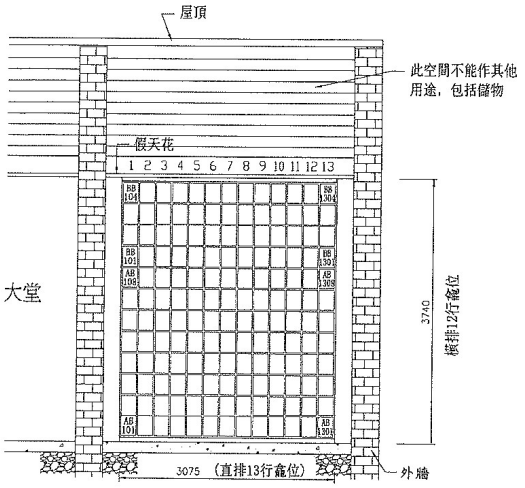
註冊編號#: AP(E)2096/63

註冊有效期屆滿日期#: 31/12/2025

RECEIVED
20 JUN 2023
Private Columbaria Affairs Office
FEHD

 # 須與《建築物條例》(第123章)第3條所指的名冊相符
** 刪去不適用者*

建議樓面平面圖 就截算前骨灰安置所的牌照申請



(按公制比例繪製) 1:50

龕牆2 建議骨灰安置所大樓樓面立面圖（圖則編號003B）

骨灰安置所名稱：自由福居

地址：新界沙頭角塘肚坪村24號
(丈量約份第41約地段第1423號B分段(部分))

20-6-2023
日期（日 / 月 / 年）

張健龍
申請人(如屬自然人) /~~獲授權人士 / 獲授權合夥人~~*姓名及簽署

香港身份證號碼 /~~旅遊證件號碼~~*

法人團體 / 合夥*印章(如適用)

RECEIVED
20 JUN 2023
Private Columbaria Affairs Office FEHD

20-6-2023
日期（日 / 月 / 年）

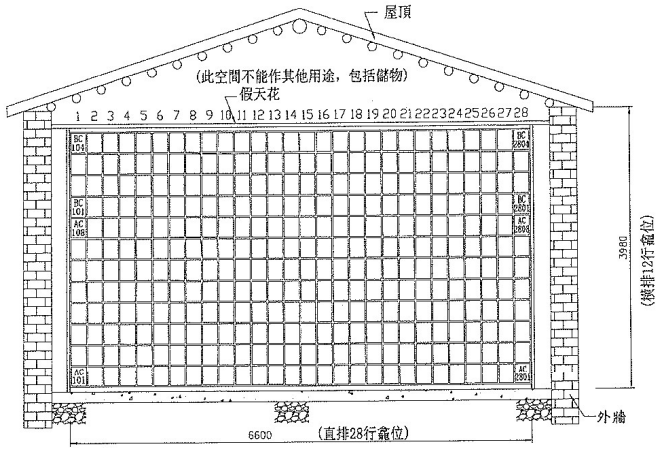
譚梓森
認可人士/~~註冊結構工程師~~* 簽署和姓名
(認可人士/註冊結構工程師指根據《建築物條例》(第123章)第 3條註冊的人士)

註冊編號#: AP(E)2096/63

註冊有效期屆滿日期#: 31/12/2025

 # 須與《建築物條例》(第 123 章)第 3 條所指的名冊相符
** 刪去不適用者*

建議樓面平面圖 就截算前骨灰安置所的牌照申請



骨灰安置所名稱：自由福居

地址：新界沙頭角塘肚坪村24號
(丈量約份第41約地段第1423號B分段(部分))

(按公制比例繪製) 1:50

龕牆3　建議骨灰安置所大樓樓面立面圖（圖則編號003C）

20-6-2023
日期（日 / 月 / 年）

張健龍
申請人(如屬自然人) /~~獲授權人士~~ /~~獲授權合夥人~~*姓名及簽署

香港身份證號碼 /~~旅遊證件號碼~~*

法人團體 / 合夥* 印章(如適用)

 # 須與《建築物條例》(第 123 章)第 3 條所指的名冊相符
** 刪去不適用者*

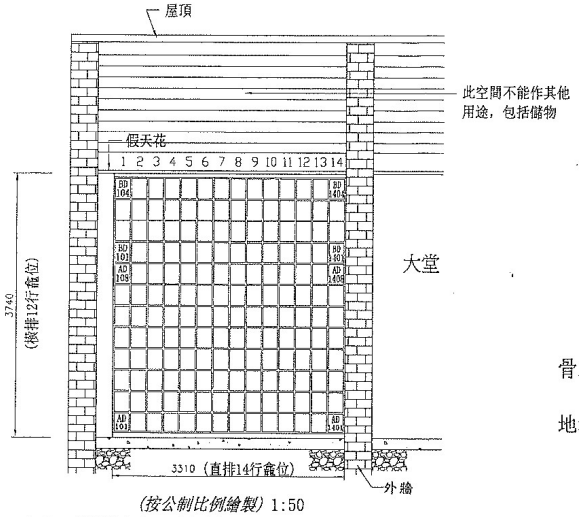
20-6-2023
日期（日 / 月 / 年）

譚梓森
認可人士/~~註冊結構工程師~~* 簽署和姓名
(認可人士/註冊結構工程師指根據《建築物條例》(第123章)第 3 條註冊的人士)

註冊編號#: AP(E)2096/63

註冊有效期屆滿日期#: 31/12/2025

建議樓面平面圖 就截算前骨灰安置所的牌照申請



(按公制比例繪製) 1:50

龕牆4 建議骨灰安置所大樓樓面立面圖（圖則編號003D）

骨灰安置所名稱：自由福居

地址：新界沙頭角塘肚坪村24號
(丈量約份第41約地段第1423號B分段(部分))

20-6-2023
日期 (日 / 月 / 年)

張健龍
申請人(如屬自然人) /~~獲授權人士~~ /~~獲授權合夥人~~*姓名及簽署

香港身份證號碼 /~~旅遊證件號碼~~*

法人團體 / 合夥*印章(如適用)

RECEIVED
20 JUN 2023
Private Columbaria Affairs Office
FEHD

20-6-2023
日期 (日 / 月 / 年)

譚梓森
認可人士/~~註冊結構工程師~~* 簽署和姓名
(認可人士/註冊結構工程師指根據《建築物條例》(第123章)第3條註冊的人士)

註冊編號#: AP(E)2096/63

註冊有效期屆滿日期#: 31/12/2025

 # 須與《建築物條例》(第123章)第3條所指的名冊相符
** 刪去不適用者*

Response to Comments for Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories [Rezoning Application No. Y/NE-STK/5]

Comments from Transport Department dated 5 February 2024	Responses
(a) From the information provided by the applicant. I have reservation on the proposal from traffic impact's viewpoint. The applicant should further elaborate the following:	Noted.
(i) The existing traffic condition survey data presented in the report are all outdated, including vehicular count survey and public transport passenger count survey. Please provide up to date data to support the validity of this traffic impact assessment;	On the 2024 Ching Ming Festival, a traffic count survey was carried out and the evaluation findings were incorporated into the updated Traffic Impact Assessment (**Annex A**).
(ii) It is noted that the access from Sha Tau Kok Road and the subject site serves both pedestrian and vehicles. The applicant is required to demonstrate the measures provided could ensure pedestrian safety;	As shown in **Figure 4.1** of the revised TIA, shuttle bus service will be available for visitors who need to travel directly between the Application Site and Sheung Shui Station. Therefore, visitors do not need to walk from the junction at Sha Tau Kok Road to access the application site. The site plan prioritizes pedestrian safety by ensuring a clear separation between pedestrian routes and vehicle routes. This segregation is illustrated in **Figure 3.2.** Key pedestrian safety measures include: a. Pedestrians and Vehicles Segregation: Pedestrian routes are clearly marked and separated from vehicular routes to minimize interactions between pedestrians and vehicles. b. Lighting systems are in place to ensure pedestrian areas are well-lit and monitored.
(iii) The applicant is required to provide measures for deterring illegal parking in the vicinity of Tong To by visitors of the proposed columbarium;	Noted. Administrative measures will be implemented to ensure that visitors accessing the application site by only taking the shuttle bus in order to prevent illegal parking.

Response to Comments for Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories [Rezoning Application No. Y/NE-STK/5]

Comments from Transport Department dated 5 February 2024		Responses
(iv)	The applicant is required to substantiate the estimated trip generation of the visitors;	Noted. Please refer to **Section 5.2** of the updated TIA, the anticipated peak hourly trip generation of visitor would be 44 persons per hour.
(v)	Clarify on the number of visitors anticipated to visit the Columbarium during festive periods and demonstrate that proposed 27 seater shuttle bus is sufficient to accommodate the estimated number of visitors;	Noted. The expected maximum number of visitors per hour is 44 persons, which is a capacity that can be served by two shuttle buses with a seating capacity of 27 passengers each.
(vi)	The applicant is required to provide measures for deterring illegal parking in the vicinity of Sha Tau Kok Road near pick-up/drop-off point by visitors of the proposed columbarium;	As shown in **Figure 4.1** of the revised TIA, shuttle bus service will be available for visitors who need to travel directly between the Application Site and Sheung Shui Station, instead of the previous pick-up location at Sha Tau Kok Road. This change aims to prevent illegal parking at Sha Tau Kok Road.
(vii)	The applicant is required to demonstrate the adequacy of the proposed visitor pick-up/drop locations for the forecasted number of visitors (i.e. on a dimensioned layout plan and preferable using swept path analysis);	The pick-up/drop-off location is illustrated in **Figure 3.2** of the revised TIA. The application site would generate a maximum of 44 visitors per hour. The revised TIA also contains a Swept Path Analysis for the shuttle bus.
(viii)	The applicant is required to demonstrate (preferable by swept path analysis) the adequacy of the local access for the forecasted traffic conditions (i.e. between the site and Sha Tau Kok Road) for catering the proposed 27 seater shuttle bus. Road width and passing bays should be highlighted;	Noted. Swept Path Analysis is included in the revised TIA, it demonstrates the access road serving the Application Site could provide sufficient maneuvering space for a 27-seater shuttle bus. Also, road width and passing bays is highlighted in the Swept Path Analysis.
(ix)	The applicant is reminded U-turing on the proposed pick-up/drop-off point on Sha Tau Kok Road is prohibited. Please present the proposed shuttle bus routes including the inbound and outbound services; and	Noted. The routing shuttle bus has been revised and would not u-turn at Sha Tau Kok Road, as shown in **Figure 4.1**.
(x)	The latest planned development of North District from PlanD which would affect the TIA of the columbarium should be incorporated in the assessment.	Noted. Please refer to the **Section 5.4**, the latest planned and committed development of North District.

Response to Comments for Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories [Rezoning Application No. Y/NE-STK/5]

Comments from Transport Department dated 5 February 2024	Responses
(b) Any traffic measures identified as required to mitigate/manage adverse traffic impact from the proposed columbarium should be implemented by the applicant.	Given the small scale of the columbarium, which consists of 864 niches, there would only be one extra trip in each direction during peak hours. Consequently, the proposed columbarium would not have any adverse traffic impact on the surrounding road network.
(c) We will offer further comments on the application under transport operation aspects after upon receiving the above information especially on the update of the survey data.	Noted. The visitor will only be served if they register through the internal booking system and utilize the shuttle bus service. Given the convenience of the shuttle service directly connecting Sheung Shui Station and the Application Site, as well as the administrative measures in place for applicants, it is anticipated that visitors will not use public transport to reach the application site.

Annex A
Revised Traffic Impact Assessment Report

Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

TRAFFIC IMPACT ASSESSMENT REPORT

Reference: 31041-T01-01
Date: July 2024

AXON
CONSULTANCY

Contents

1 Introduction 1

1.1 Background 1
1.2 Objectives 1
1.3 Structure of Report 1

2 The Proposed Development 3

2.1 The Application Site 3
2.2 The Proposed Development 3

3 Traffic Management and Visitor Strategy 4

3.1 Introduction 4
3.2 Administrative Visitor Booking System 4
3.3 Shuttle Bus Services 5

4 Existing Traffic Situation 6

4.1 Existing Road Network 6
4.2 Shuttle Bus Routes 6
4.3 Traffic Surveys 7
4.4 Existing Traffic Assessment 7

5 Future Traffic Situation 10

5.1 2028 Design Year Road Network 10
5.2 Development Traffic Generation 11
5.3 Regional Traffic Growth 12
5.4 Major Planned/ Committed Developments 14
5.5 Reference and Design Flows 15
5.6 Future Traffic Assessment 16

6 Summary and Conclusion 18

6.1 Summary 18

6.2 Conclusions 18

Figures

Appendix A Swept Path Analysis Junction Analysis

Appendix B Junction Analysis

1 Introduction

1.1 Background

"自由福居", located at No. 24 Tong To Shan Tsuen, Sha Tau Kok, New Territories (hereafter, "the site"), has been operated as a columbarium use since 1988. The site currently contains a total of 864 niches, including 60 niches sold. The remaining niches are yet to be sold. The facility's operation and capacity necessitate an evaluation of its traffic impact, especially as the columbarium reaches full occupancy.

The Applicant intends to submit an application under Section 12A to the Town Planning Board for an amendment to the approved Sha Tau Kok Outline Zoning Plan Number S/NE-STK/2 from the existing "Village Type Development" zone to the "Other Specified Uses" zone annotated "Columbarium".

AXON Consultancy Limited has been commissioned to carry out this Traffic Impact Assessment (TIA) to support the application for the amendment of the plan and facilitate the proposed development at the Application Site.

1.2 Objectives

The objectives of the traffic impact study are as follows:

- to estimate the potential traffic generation/attraction due to the proposed development; and
- to assess the future traffic situation in the surrounding network; and
- to appraise the potential traffic impacts of the development; and
- to evaluate the internal transport facilities of the development; and
- to consider road improvement proposals, if required.

1.3 Structure of Report

Chapter 1 – Introduction, which covers the study's background, objectives and report structure.

After this introductory chapter, there are the following chapters:

Chapter 2 – The Proposed Development, which describes the site location, development schedules;

Chapter 3 – Traffic Management and Visitor Strategy, outlines the visitor management systems and traffic arrangements, including the administrative visitor booking system, special traffic arrangements, and shuttle bus services;

Chapter 4 – Existing Traffic Situation, which presents the existing local road network within the vicinity of the proposed development, the details of the traffic count survey and the traffic assessment of the existing traffic conditions;

Chapter 5 – Future Traffic Situation, which presents the design year future traffic flows under reference and design scenarios based on the assumed annual growth rate taken into account the planned adjacent developments;

Chapter 6 – Summary and Conclusion, which summarises the findings of this traffic impact assessment and presents the conclusions regarding the traffic issues associated with the proposed development.

2 The Proposed Development

2.1 The Application Site

The Application Site spans approximately 160m^2 and is located at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, known as No. 24 Tong To Shan Tsuen, Sha Tau Kok, New Territories. The site location is depicted in **Figure 2.1**.

The site can be accessed via a single-track access road, which is branching off from Sha Tau Kok Road - Shek Chung Au.

2.2 The Proposed Development

The existing columbarium-used development, "自由福居", has been operating since 1988. The Applicant has reported that the site contains a total of 864 niches, with 60 niches sold. The proposed development aims to fully utilize the columbarium's capacity. The development schedule is summarised in **Table 2.1** below.

Table 2.1 Development Schedule

Design Parameter	Quantity of Proposed Development Parameter
Application Area	About 160m^2
Existing Zoning	"Village Type Development" zone
Number of Sold Niches	60
Proposed Zoning	"Other Specified Uses" zone annotated "Columbarium"
Total Number of Niches	864

3 Traffic Management and Visitor Strategy

3.1 Introduction

Effective traffic management and visitor strategy are crucial for ensuring smooth operation and minimising traffic impact at "自由福居". The following sections detail the administrative visitor booking system, special traffic arrangements, and shuttle bus services designed to manage visitor traffic effectively.

3.2 Administrative Visitor Booking System

To manage visitor traffic effectively, "自由福居" has implemented a comprehensive Administrative Visitor Booking System, which includes the following key components:

a. **Advance Reservations**
Visitors must make appointments in advance through the columbarium's booking system. Reservations are processed on a first-come, first-served basis to ensure fair access for all visitors and to control the flow of visitors.

b. **Confirmation of Slots**
Upon booking, visitors receive confirmation of their pick-up and drop-off times. These slots are carefully managed to avoid overlapping and excessive traffic at any given time, ensuring a steady flow of visitors and reducing congestion.

c. **Booking Verification**
Visitors are required to present their booking confirmation at lay-by near Sheung Shui Station before boarding the shuttle bus. This verification process ensures that only those with scheduled appointments are allowed to visit, maintaining the planned traffic flow and preventing unplanned influxes of visitors.

d. **Information Dissemination**
Clear instructions and guidelines are provided to visitors regarding the booking process, shuttle bus usage, and traffic management measures. This information is disseminated through various channels, including booking confirmation emails/messages, the columbarium's website, and informational brochures.

3.3 Shuttle Bus Services

The existing shuttle bus service with 27-seater light buses is an integral part of the visitor management strategy, providing a convenient and efficient means of transportation for visitors to "自由福居". It is proposed to enhance the existing shuttle bus to cater to the future demand of the development traffic. The existing shuttle bus service includes the following features:

a. Operating Hours

The shuttle service operates from 08:00 to 18:00 daily in line with the operation hours of "自由福居", providing regular and reliable transportation for visitors.

b. Pick-Up/Drop-Off Locations

San Wan Road Lay-By

The shuttle bus service runs between Sheung Shui Station and "自由福居", with the pick-up and drop-off point located at the southern side lay-by area on San Wan Road, close to Exit B2 of Sheung Shui MTR Station, as shown in **Figure 3.1**.

"自由福居"

On the "自由福居" side, the pick-up/drop-off areas are provided near the application area, as shown in **Figure 3.2.** A Swept Path Analysis of 27 seater shuttle bus, enclosed in **Appendix A**, depicted that sufficient maneuvering space could be provided along between the Access Road to Tong To Shan Tsuen and the "自由福居". Consents from the lot owners of adjacent private lots have been obtained from the Applicant.

c. Scheduled Intervals

Shuttle buses run at scheduled intervals, coordinated with the visitor booking system to ensure that the number of visitors is regulated throughout the day. This scheduling helps to prevent congestion and maintain smooth traffic flow.

d. Visitor Control

All visitors to "自由福居" are required to use the shuttle bus service, which helps to control the number of visitors and manage traffic effectively. The use of the shuttle service ensures that the local road network is not overwhelmed by private vehicles, particularly during peak periods.

4 Existing Traffic Situation

4.1 Existing Road Network

The major road networks in the vicinity of the Application Site are listed as follows:

San Wan Road serves as a District Distributor. It is a dual-two carriageway, that runs in the east-west direction.

Fanling Highway functions as an Expressway, featuring a dual-three carriageway that stretches in an east-west direction. This road is a primary route for the commute of the motorists between Tai Po and San Tin at its endpoints, passing through Fanling and Sheung Shui along the way. At the eastern end, the road links up with the Tolo Highway at the Lam Kam Interchange, which also connects with Tai Wo Service Road West, Lam Kam Road, and Tai Po Road. Towards the western end, the highway goes through the Kwu Tung area and succeeds the San Tin Highway.

Heung Yuen Wai Highway functions as a Rural Trunk, featuring a dual-two carriageway that stretches in the north-south direction. It acts as a primary linkage between the Fanling Highway and the Heung Yuen Wai Boundary Control Point. The road includes the Lung Shan Tunnel and Cheung Shan Tunnel, along with four interchanges, making it easier for motorists in Sha Tau Kok, Ta Kwu Ling, and Ping Che to reach Fanling, Sheung Shui, Tai Po, and Kowloon.

Sha Tau Kok Road – Wo Hang functions as a Rural Road A. It is a signle-two carriageway that runs in the east-west direction.

Sha Tau Kok Road – Shek Chung Au functions as a rural road, serving as the sole access route to Sha Tau Kok Control Point. This single two-lane carriageway runs in the east-west direction.

4.2 Shuttle Bus Routes

During the festivals and their shallow periods, the existing shuttle bus routes are summarised as follows:

Ingress Route

Starting from San Wan Road, via Lung Sum Avenue, Lung Wan Street, San Wan Road, So Kwun Po Road, Fanling Highway, Heung Yuen Wai Highway, Sha Tau Kok Road – Wo Hang and then Sha Tau Kok Road – Shek Chung Au, eventually leading to its final stretch on the access road to Tong To Shan Tsuen.

Egress Route

Starting from the access road to Tong To Shan Tsuen, via Sha Tau Kok Road – Shek Chung Au, Sha Tau Kok Road – Wo Hang, Heung Yuen Wai Highway, Fanling Highway and then So Kwun Po Road, ultimately arriving at San Wan Road

The vehicular ingress/egress arrangement of the proposed development is depicted in **Figure 4.1**.

4.3 Traffic Surveys

Classified Turning Movement Count Survey

In order to appraise the existing traffic conditions, classified turning movement count surveys have been carried out at the key junctions of the study area, as shown in **Figure 4.2**, on the Ching Ming Festival in 2024 (4th April 2024) from 8:00 to 18:00.

The traffic counts were recorded in a 15-minute interval, and to be converted into passenger car unit (pcu). The highest consecutive 15-minute hourly traffic volume was adopted as the peak hour traffic flow.

The peak hour of the road network has been identified as 08:15 to 09:15 and 2024 observed traffic flow during peak hour during the festival periods is depicted in **Figure 4.3**.

Lay-by Occupancy Survey

To evaluate the existing occupancy of the San Wan Road Lay-by, which serves as the terminating point for the shuttle bus service, as shown in **Figure 3.1,** a comprehensive survey was conducted during the Ching Ming Festival on 4th April 2024, from 08:00 to 18:00.

During the survey, vehicles entering and exiting the lay-by were categorized by vehicle type, and their arrival and departure times were recorded. The primary objective was to determine the lay-by's occupancy throughout the day.

4.4 Existing Traffic Assessment

Junction Capacity Assessment

Junction capacity assessments have been conducted at major junctions along the vehicular ingress/egress route, following the guidelines set out in the Transport Planning and Design Manual ("TPDM") Volumes 2 and 4. The results of these assessments are summarised in **Table 4.1**, while the detailed calculation sheets can be found in **Appendix B**.

The performance of a priority junction or roundabout is indicated by its Design Flow / Capacity Ratio ("DFC"). A DFC value of 0.85 or below is considered within an acceptable level without causing undue delay to motorists passing through the concerned junctions.

The performance of a traffic signalised junction is indicated by its reserve capacity ("RC"). A RC value of 15% or above is considered within an acceptable level without causing undue delay to motorists passing through the concerned junctions.

Table 4.1 Existing Junction Performance

Jun No.	Junction Location	Type / Capacity Index *	Observed Scenario
J1	Sha Tau Kok Road - Shek Chung Au / Access Road to Tong To Shan Tsuen	Priority/ DFC	0.12
J2	Heung Yuen Wai Highway / Sha Tau Kok Road – Wo Hang / Sha Tau Kok Road – Ma Mei Ha	Roundabout/ DFC	0.37
J3	Fanling Highway / So Kwun Po Road	Roundabout/ DFC	0.58
J4	San Wan Road / So Kwun Po Road Slip Road	Signalised / RC	>100%

*Notes: * RC =reserve capacity; DFC - Design Flow / Capacity Ratio.*

As depicted in **Table 4.1**, all key junctions, currently operate below their maximum capacities during the identified peak.

Lay-by Occupancy Assessment

To evaluate the lay-by occupancy of the lay-by area on San Wan Road, near Exit B2 of Sheung Shui MTR Station, an extensive survey was conducted throughout the shuttle bus service period during the Ching Ming Festival. The instant occupancy of the lay-by was collected in a 5-minute interval.

The results were illustrated in **Figure 4.4**, which can be interpreted as follows:

a. **Horizontal Axis**: Represents the time intervals during the Ching Ming Festival, from 08:00 to 18:00, with data points collected every 5 minutes.

b. **Vertical Axis**: Represents the length of the lay-by occupied, measured in meters.

c. **Blue Bars:** Indicate the length of the lay-by occupied by other road users.

d. **Red Bars:** Indicate the length of the lay-by occupied by "自由福居" shuttle buses which is assumed to be 9m in length.

The combined height of the blue and red bars at each time interval shows the total length occupied.

e. **Orange Line**: Represents the maximum length provided by the San Wan Road lay-by, which is 59 meters.

The results show that the busiest periods are observed around 08:00 - 08:05, where the occupancy totals about 45 meters. Even during the peak periods, the lay-by occupancy did not exceed the maximum provided length of 59 meters. This indicates that the lay-by has sufficient capacity to accommodate the shuttle bus services for "自由福居", even during peak festival periods.

5 Future Traffic Situation

5.1 2028 Design Year Road Network

Given that"自由福居" has been in operation since 1988. Typically, the design year is determined as either three years post-completion (not applicable) or five years subsequent to the application year (resulting in 2028). The decision has been made to adopt the longer duration as it provides a more conservative approach. Consequently, the year 2028 has been selected as the design year for this study.

For the Design Year 2028, the Growth Factor Method is employed to forecast traffic. This method utilises the historical data from Annual Traffic Census Data (ATC) and demographic trends from the Projected Population by District Council District to predict future traffic volumes. The more significant growth factor derived from these two sources is adopted to ensure the most conservative traffic estimate.

A review of upcoming road and junction improvement projects reveals a few expected changes to the current road network prior to Design Year 2028.

- With a projected completion year of 2030, the Improvement to So Kwun Po Interchange aims to establish a new north-south corridor connecting San Wan Road and Pak Wo Road above the existing roundabout. This strategic improvement is anticipated to alleviate traffic volume at So Kwun Po Road Roundabout and enhance traffic conditions along Fanling Highway and its vicinity.

- With a scheduled completion year of 2031, the Po Shek Wu Road Flyover with the goal of offering an elevated right-turning bypass flyover over the current Po Shek Wu Road roundabout to redirect southbound traffic heading towards Yuen Long bound. This initiative has the potential to reduce traffic flow circulating in the roundabout and enhance traffic conditions along Fanling Highway and its surrounding areas.

Considering the ongoing and planned infrastructure projects, it is evident that any significant developments influencing traffic patterns are either in the planning stages or already underway. These aspects are elaborated upon in **Section 5.4** of this report.

The current and expected road network developments reinforce the suitability of using the Growth Factor Method. This approach effectively leverages existing traffic trends to project future traffic patterns, ensuring a robust and realistic forecast for the Design Year 2028.

5.2 Development Traffic Generation

Modal Split

Based on the details outlined in **Section 3.3**, shuttle bus services with capacity of 27 seats were made available for grave sweepers visiting "自由福居" during festivals and their shallow periods. An analysis of vehicular and pedestrian traffic carried out during the 2024 Ching Ming Festival revealed that all visitors accessed "自由福居" by utilizing the shuttle buses. These findings were a direct outcome of the applicant's comprehensive Administrative Visitor Booking System highlighted in **Section 3.2**.

Trip Generation and Attraction

According to the results of the traffic survey outlined in **Section 4.3**, the shuttle bus service has a maximum provision of 2 vehicles per hour for each direction during peak hour during 2024 Ching Ming Festival.

In 2024 Ching Ming Festival, a trip generation survey was been carried out and the results are demonstrated in **Table 5.1**.

Table 5.1 Peak Hour Person Generation/Attraction For "自由福居" During 2024 Ching Ming Festival

No. of Person Trips in Peak Hour (person/hour)		Hourly Person Trip Rate (person/hour per niche)^	
Generation	Attraction	Generation	Attraction
3	3	0.05	0.05

Notes: ^ Information provided by the applicant, 60 niches were sold.
Hourly Person Trip Rate = No. of Perion Trips in Peak Hour / 60

Based on the Hourly Person Trip Rate (person/hour) calculated and outlined in **Table 5.1**, the Peak Hour Vehicular Trip Generation/Attraction Rates (person/hour per niche) are estimated and summarised in **Table 5.2**.

Table 5.2 Anticipated Peak Hour Traffic Trip Generation/Attraction Rate For "自由福居"

Hourly Person Trip Rate (person/hour per niche)		Hourly Vehicular Trip Rate (pcu/hour per niche)^	
Generation	Attraction	Generation	Attraction
0.05	0.05	0.00185	0.00185

Notes: ^ Hourly Vehicular Trip Rate = Hourly Person Trip Rate / 27 (no of seats per shuttle bus) × 1.5 (pcu factor of shuttle bus)

The person and vehicular trip rates illustrated in **Table 5.1** and **Table 5.2** were utilized to calculate the total trip generation for"自由福居" after selling all the remaining niches in the future. The results are illustrated in **Table 5.3**.

Table 5.3 Future Trips Generation/Attraction For "自由福居"

Ching To Yuen	No. of Person Trips in Peak Hour (person/hour)		No. of Vehicular Trips in Peak Hour (pcu/hour)	
	Generation	Attraction	Generation	Attraction
Adopted Trip Rate	0.05	0.05	0.00185	0.00185
Total Trips (with total niches: 864)	*44*	*44*	*3**	*3**

*Note: * 3 pcu/hour equivalents to 2 veh/hour, by considering 1.5 pcu factor for shuttle bus*

As shown in **Table 5.3**, it is projected that there will be **44** visitors per hour which results in the total vehicular trips of **3** pcu per hour per direction for the "自由福居" during peak hour on the festival periods when all the 864 niches are fully sold.

5.3 Regional Traffic Growth

For the estimation of traffic flows in the design year of 2028, it is proposed to adjust the existing traffic flows to take into account the natural traffic growth.

Annual Traffic Census (ATC)

Reference has been made to the 2020 to 2022 Annual Traffic Census Reports, published by Transport Department. The traffic data recorded at counting stations adjacent to the Application Site are shown in **Table 5.4.**

Table 5.4 Annual Traffic Census Data

No.	Link	From	To	Road Type	2020	2021	2022	Growth Rate p.a.
5003	Fanling Highway	So Kwun Po INT	Wo Hop Shek INT	EX	61,080	64,840	62,830	1.42%
5041	Lung Shan Tunnel	Fanling Highway	Sha Tau Kok Road	RT	13,840	16,870	16,400	8.86%
5660	Sha Tau Kok Rd	On Kui St	Ping Che Rd	RR	23,740	22,980	22,280	-3.12%
5860	Sha Tau Kok Rd	Ping Che Rd	Shun Lung St	RR	6,300	5,970	4,900	-11.81%
5885	San Wan Rd	Ramp A of So Kwun Po INT	Lung Sum Ave	DD	17,120	15,680	15,600	-4.54%
6653	Ping Che Rd	Sha Tau Kok Rd	Lin Ma Hang Rd	DD	11,030	11,870	11,510	2.15%
Total					133,110	138,210	133,520	0.15%

Table 5.4 presents the traffic flow information spanning three years. Since the opening of Heung Yuen Wai Highway in 2019, the traffic pattern on Sha Tau Kok Road has undergone a redistribution in 2019 and has remained stable since 2020. Notably, there has been a significant reduction in traffic volume along Sha Tau Kok Road, while there has been a substantial increase in traffic volume within Heung Yuen Wai Highway. Based on Annual Traffic Census Reports 2020 to 2022, the data indicates variable annual growth rates for different road links, with some experiencing increases and others experiencing decreases in traffic volume. When considering all the links collectively, the compounded annual growth rate averages out to **+0.15%**.

Projected Population Data

According to the report "Projections of Population Distribution 2023-2031" published by the Planning Department, the population growth data from the year 2024 to 2028 in North District is summarised in **Table 5.5**.

Table 5.5 Projected Population by District Council District, 2023-2031

District Council District	Year 2024	Year 2028	Growth Rate p.a. (%)
North	344,900	397,000	3.58%

The data indicate the growth in population in North District is at an annual rate of **+3.58%** from 2024 to 2028.

After comparing the historical data and the future planning data, for conservative purposes, an annual growth rate of **+3.58%** was adopted. This growth factor will apply in 2024 observed traffic flows.

5.4 Major Planned/ Committed Developments

The forecast includes traffic generated by major planned or committed developments near the site, detailed in **Table 5.6**.

Table 5.6 Major Planned/ Committed Developments

Location	Type of Development	Completion Year
Proposed Temporary Transitional Housing and Ancillary Facilities for a Period of 7 Years at Government Land in D.D. 82, Ping Che, Ta Kwu Ling, New Territories	Residential Development	Before or in 2028
Sierra Life (Proposed Mixed Housing Development including 'Flat' (Public Rental and Subsidized Sale Flats), 'Residential Institution' (Elderly Flats under the Senior Citizen Residences Scheme), 'Shop and Services', 'Eating Place', 'Social Welfare Facility' (Residential Care Home for Elderly) and 'Public Vehicle Park') at Address:72 Pak Wo Road, Fanling, New Territories	Residential Development	Before or in 2028
Proposed Minor Relaxation of Plot Ratio and Building Height Restrictions for Permitted Public Housing Development at Government Land in Areas 4 and 30, Sheung Shui, New Territories (Site 2 Phase 1) - Public vehicle park	Residential Development	Before or in 2028
Subsidised Sale Flats at Ching Hiu Road (Ching Tao Court)	Residential Development	Before or in 2028
Proposed Minor Relaxation of Plot Ratio and Building Height Restrictions for Permitted Public Housing Development at Government Land in Areas 4 and 30, Sheung Shui, New Territories (Site 1)	Residential Development	Before or in 2028
Proposed Minor Relaxation of Plot Ratio and Building Height Restrictions for Permitted Public Housing Development at Government Land in Areas 4 and 30, Sheung Shui, New Territories (Site 2 Phase 2)	Residential Development	Before or in 2028
To rezone the application site from "Government, Institution or Community" to "Residential (Group A)4" at Lots 3261 S.A RP, 3262 S.A, 3263 S.A (Part), 3261 S.B RP (Part), 3262 S.B RP (Part), 3263 S.B (Part), 3262 S.B ss.1 (Part), 3262 S.C RP (Part), 3262 S.C ss.2 RP (Part), 3262 S.C ss.3 RP (Part), 3262 S.C ss.1 RP (Part), 3265 S.A RP (Part) and 3375 RP (Part) in D.D. 51 and Adjoining Government Land, Fanling, New Territories	Residential Development	Before or in 2028
Proposed Minor Relaxation of Domestic PR Restriction for Permitted Residential Development with Commercial Uses at Lot 5045 in D.D. 51, 1 Luen Fat Street, Fanling, New Territories	Residential Development	Before or in 2028
Subsidised Sale Flats at Jockey Club Road, near Fanling Law Courts Building	Residential Development	Before or in 2028
North District Community Health Centre at Pak Wo Road	Medical Development	Before or in 2028
Expansion of North District Hospital	Medical Development	Before or in 2028
Provision of columbarium at Wo Hop Shek - Phase 2	Columbarium Development	Before or in 2028
Proposed Shop and Services, Eating Place and Other Uses (including Art Studio/ Office/ Information Technology and Telecommunications Industries/ Place of Recreation, Sports or Culture) (Wholesale Conversion of an Existing Industrial Building) at No. 33 On Lok Mun Street, Fanling, New Territories	Retail Development	Before or in 2028

Location	Type of Development	Completion Year
To rezone the application site from "Village Type Development" to "Residential (Group A) 7" and amend the Notes of the zone applicable to the site at Various Lots in D.D. 51 and Adjoining Government Land, Fanling, New Territories	Residential Development	On or beyond 2029
Partial Development of Fanling Golf Course	Residential Development	On or beyond 2029
Public Housing Development at Choi Shun Street	Residential Development	On or beyond 2029
Queen's Hill Extension	Residential Development	On or beyond 2029
Public Housing Development at Fanling Area 17 (Site A), near Ling Shan Road	Residential Development	On or beyond 2029
Private Housing Development at Fanling Area 17 (Site B1 & B2)	Residential Development	On or beyond 2029
Junction Improvement at So Kwun Po Road Interchange	Junction Improvement	On or beyond 2029
Junction Improvement at Po Shek Wu Road Interchange (Po Shek Wu Road Flyover)	Junction Improvement	On or beyond 2029
Proposed Minor Relaxation of Plot Ratio and Building Height Restrictions for Permitted Flat Development with Social Welfare Facility at Various Lots in D.D. 51 and Adjoining Government Land, Ma Sik Road, Fanling, New Territories	Social Welfare Facility	On or beyond 2029
Proposed Social Welfare Facility (Residential Care Home for the Elderly) and Flat with Minor Relaxation of Building Height Restriction at Lots 834 and 838 RP in D.D. 52 and adjoining Government Land, Tin Ping Road, Sheung Shui, New Territories	Social Welfare Facility	On or beyond 2029
Expansion of Columbarium at Wo Hop Shek Cemetery (Phase 3)	Columbarium Development	On or beyond 2029
Expansion of Columbarium at Wo Hop Shek Cemetery (Phase 4)	Columbarium Development	On or beyond 2029

5.5 Reference and Design Flows

The growth factor will be applied to the traffic flows of 2024 Observed Peak Hour, to estimate the 2028 Reference Flows. The reference and design flows for Design Year 2028 are calculated from the following formulae:

2028 Reference Flows = 2024 Observed Flows x $(1+3.58\%)^4$ + Planned Development Traffic

2028 Design Flows = 2028 Reference Flows + 1.5 pcu/hr (Net Growth of Development Traffic)*

** 1.5 pcu/hr = 2028 Trip Generation: 3pcu/hr (Table 5.3) – 2024 Trip Generation: 1.5pcu/hr (Table 5.1)*

Figure 5.1 shows the 2028 Reference Peak Hour Flows in the road network. By adding the Net Growth of Development Traffic, **Figure 5.2** shows the 2028 Design Peak Hour Traffic Flows.

5.6 Future Traffic Assessment

Junction Capacity Assessment

Junction capacity assessments were carried out for the major junctions in the local road network for both the Reference and Design scenarios. The results are summarised and presented in **Table 5.7** with detailed calculation sheets attached in **Appendix B**.

Table 5.7 Future Junction Performance

Jun No.	Junction Location	Type / Capacity Index *	Reference Scenario	Design Scenario
J1	Sha Tau Kok Road - Shek Chung Au / Access Road to Tong To Shan Tsuen	Priority/ DFC	0.14	0.14
J2	Heung Yuen Wai Highway / Sha Tau Kok Road – Wo Hang / Sha Tau Kok Road – Ma Mei Ha	Roundabout/ DFC	0.44	0.44
J3	Fanling Highway / So Kwun Po Road	Roundabout/ DFC	0.80	0.81
J4	San Wan Road / So Kwun Po Road Slip Road	Signalised / RC	76.9%	76.5%

*Notes: * RC =reserve capacity; DFC - Design Flow / Capacity Ratio.*

As shown in **Table 5.7**, the capacities of all key junctions would be performing satisfactorily during the peak periods for both the Reference and Design Scenarios. Furthermore, based on the results, the impact of the proposed development traffic on the road network is negligible.

Lay-by Occupancy Assessment

Based on the lay-by occupancy data presented in **Section 4.4** and **Figure 4.4** and incorporating the net growth of shuttle service from **Table 5.3**, which projects an additional 1.5 pcu or 1 trips, the projected lay-by occupancy for 2028 is illustrated in **Figure 5.3.**

The current lay-by occupancy data indicates that the San Wan Road lay-by has adequate capacity to handle existing demand. With the anticipated increase of 1 additional shuttle bus trips per hour by 2028, the in-house model projects that these additional trips will only require 1 more loading bay which is approximately 9 more meters of the lay-by space.

Given that the maximum length provided by the lay-by is 59 meters, and the current peak occupancy is well below this limit, the analysis confirms that the lay-by will continue to have sufficient capacity.

6 Summary and Conclusion

6.1 Summary

The applicant has commissioned AXON Consultancy Limited to conduct a Traffic Impact Assessment (TIA) for the proposed development of the"自由福居" columbarium, situated at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories. This development encompasses a total of 864 niches, with 60 niches sold, and aims to formalize the site's rezoning from "Village Type Development " to "Other Specified Uses" annotated "Columbarium".

To evaluate the traffic impact during the Ching Ming Festival period, peak hour trip generation rates from the existing columbarium in "自由福居" during 2024 Ching Ming Festival were derived to ensure an accurate estimate. The observed trip rates were adopted for estimating the additional peak hour development trips by the unsold niches.

To minimize vehicular traffic in the area, the applicant provides shuttle bus services between "自由福居" and Sheung Shui MTR Station for all visitors and staff. Visitor strategies will be implemented to ensure smooth operations.

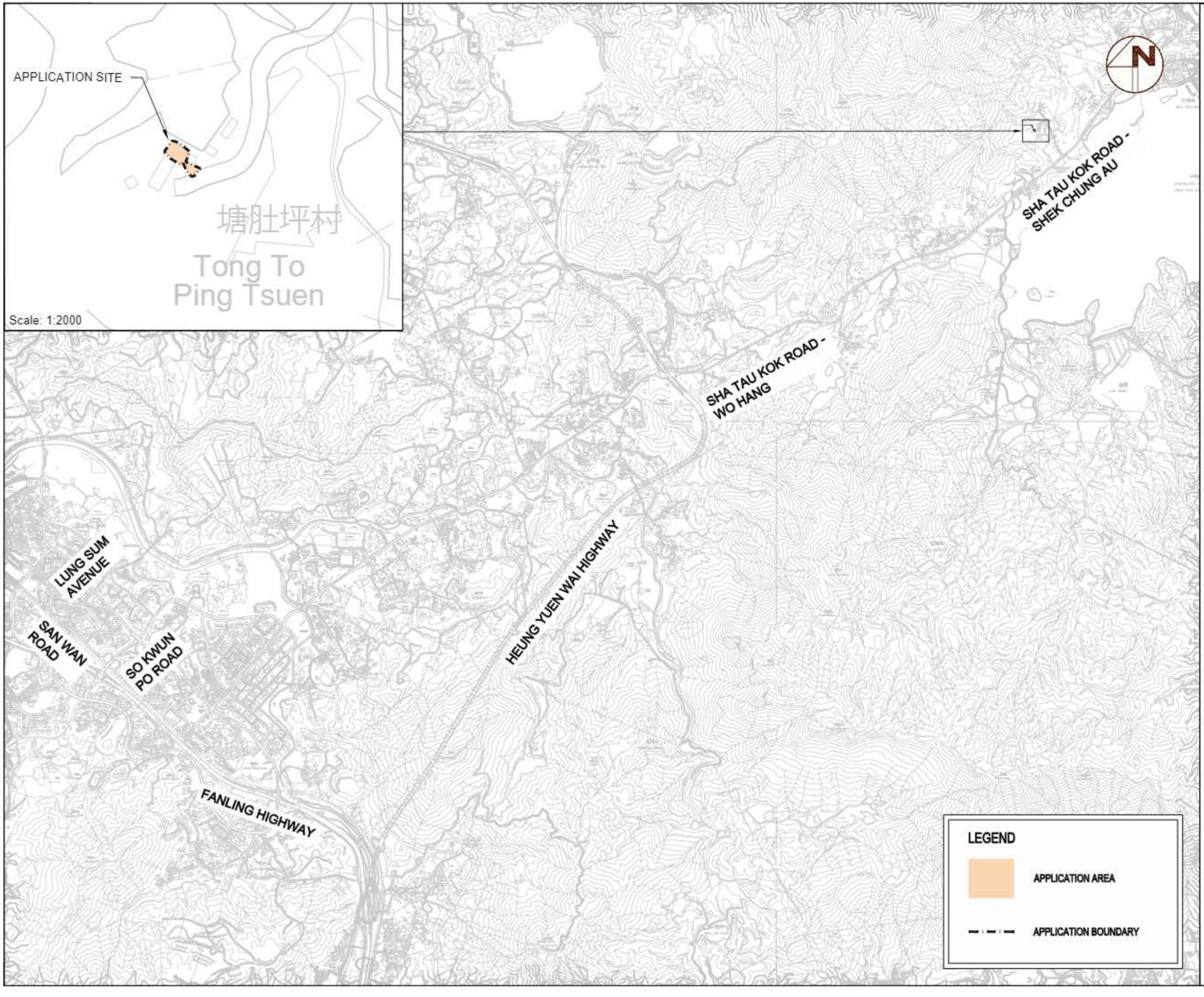
The year 2028 is used as the design year for the traffic impact assessment. After comparing historical data and future planning data, a conservative annual growth rate of +3.58% was adopted. This growth factor has been applied to the observed traffic flows in 2024 to project the 2028 anticipated traffic flows.

Capacity assessments of all major junctions along the ingress and egress routes indicated that all key junctions would perform satisfactorily under both reference and design scenarios for the year 2028. A detailed survey of the San Wan Road Lay-by confirmed its capacity to handle the increased demand from additional shuttle bus trips during operational periods.

6.2 Conclusions

The traffic impact assessment findings reveal that the road network surrounding the area will be able to handle the additional traffic from the enhanced shuttle bus service at "自由福居", which attracts 1.5 pcu/hr and generates 1.5 pcu/hr during festivals. This assessment confirms that the proposed development would not cause any adverse impact from a traffic perspective.

Figures



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SITE LOCATION

FIGURE 2.1

Scale : **1:30000 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\RAW\MXD\REPORT DRAWING\FIG 2.1_SITE LOCATION.DWG

Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

KEY LAY-BY

FIGURE 3.1

Scale : **1:500 (A3)**

Date : **JUL 2024**

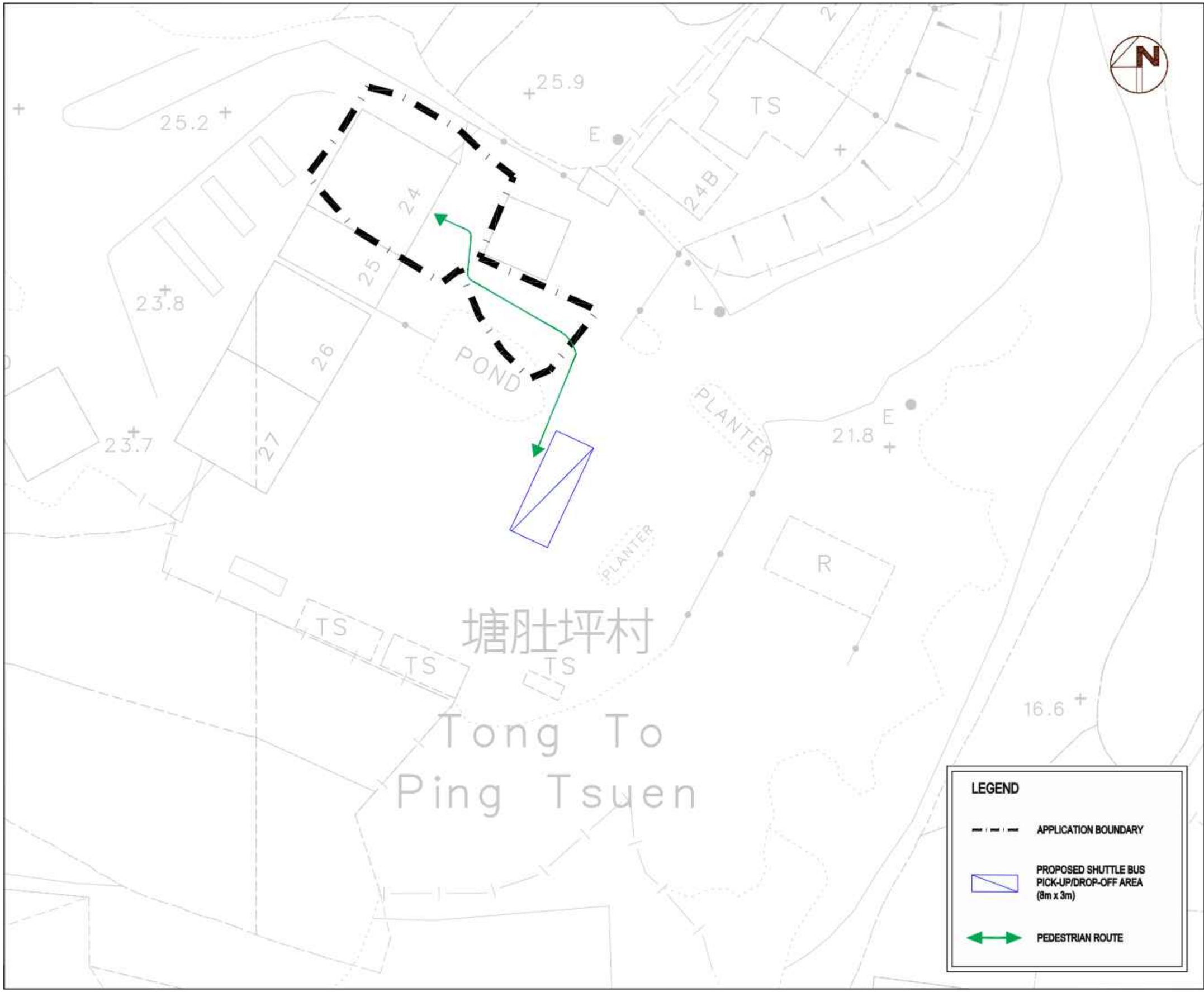
Rev. :

LEGEND

KEY LAY-BY

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG 3.1_KEY LAY-BY.DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

TRAFFIC MANAGEMENT PLAN

FIGURE 3.2

LEGEND

- APPLICATION BOUNDARY
- PROPOSED SHUTTLE BUS PICK-UP/DROP-OFF AREA (8m x 3m)
- PEDESTRIAN ROUTE

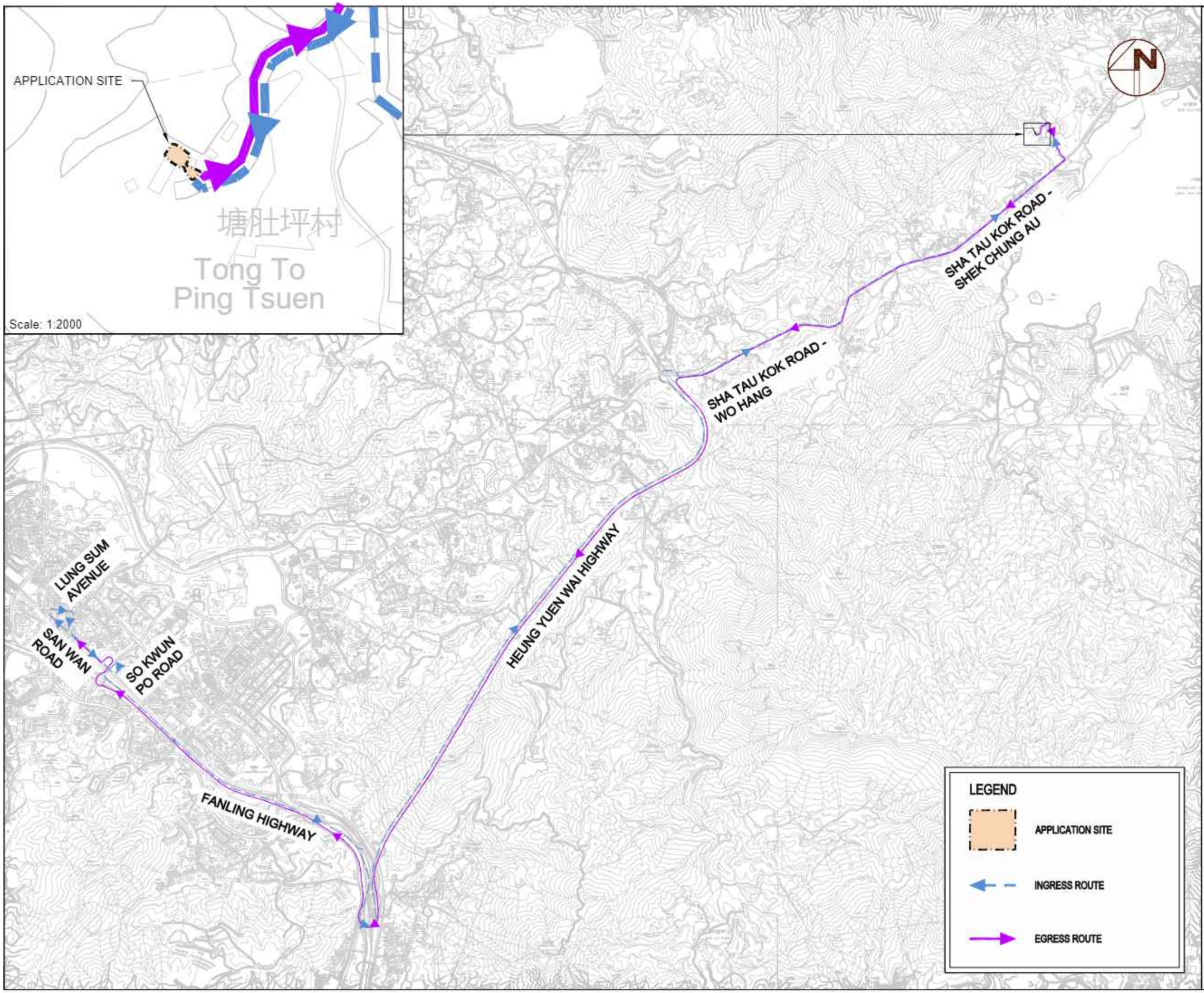
Scale : **1:500 (A3)**

Date : **JUN 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECT\191041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG 3.2_TRAFFIC MANAGEMENT PLAN.DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

VEHICULAR INGRESS AND EGRESS ROUTE

FIGURE 4.1

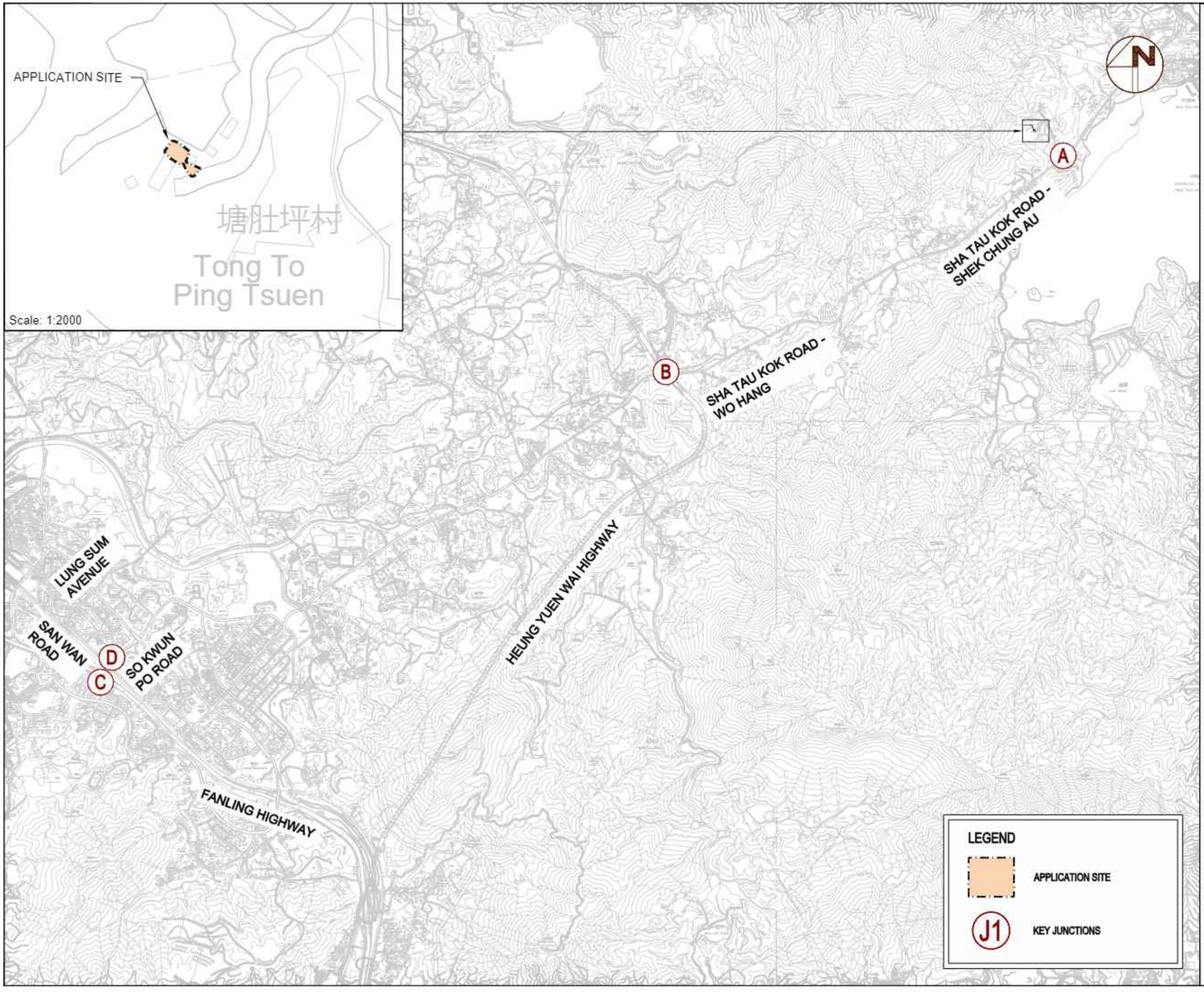
Scale : **1:30000 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG 4.1_VEHICULAR INGRESS AND EGRESS ROUTE.DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

KEY JUNCTION

FIGURE 4.2

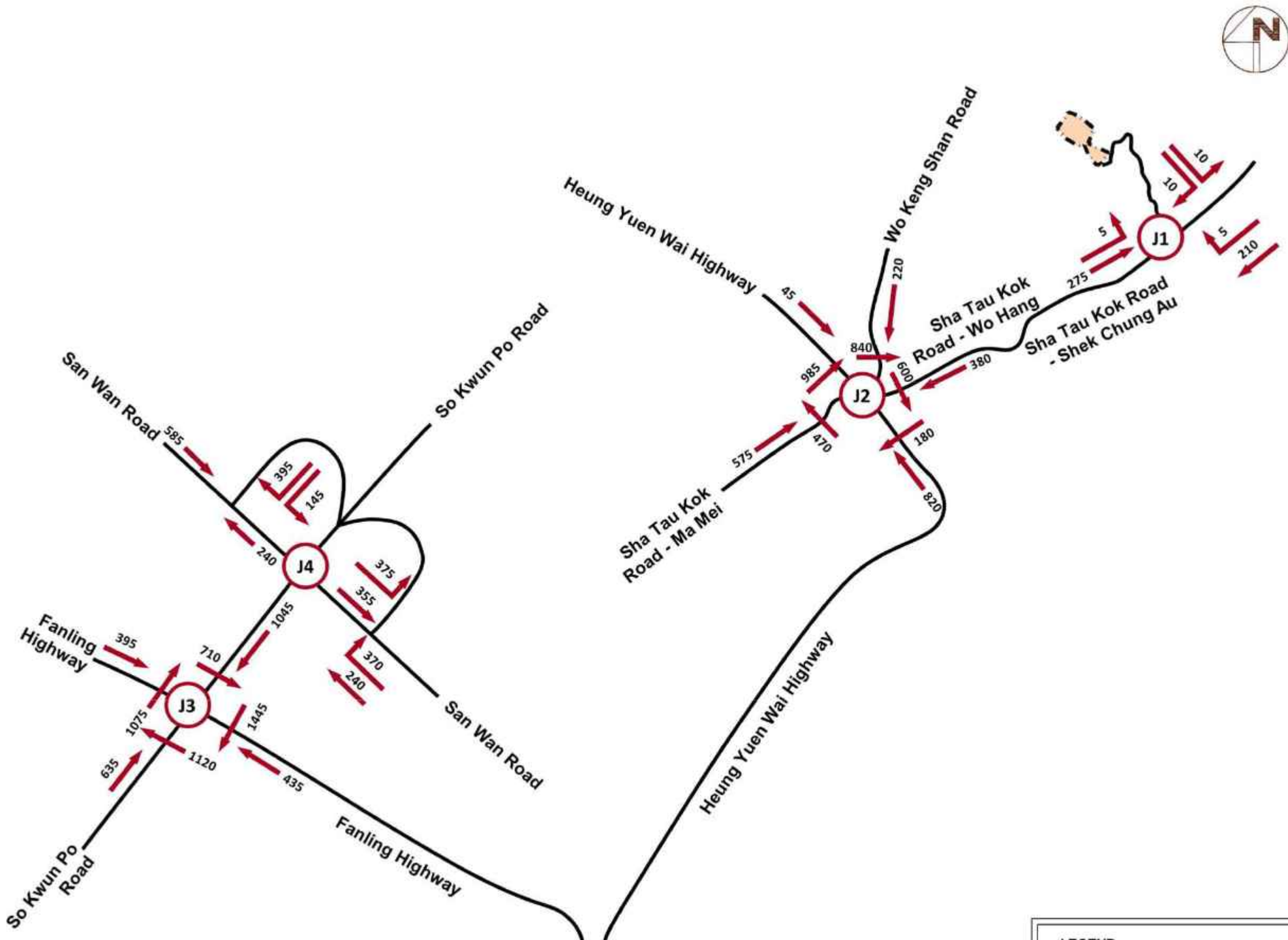
Scale : **1:30000 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECT\191041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG 4.2_KEY JUNCTION.DWG



LEGEND

APPLICATION SITE

100 TRAFFIC FLOW IN PCU/HR AT PEAK HOUR

Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

YEAR 2024 OBSERVED TRAFFIC FLOW

FIGURE 4.3

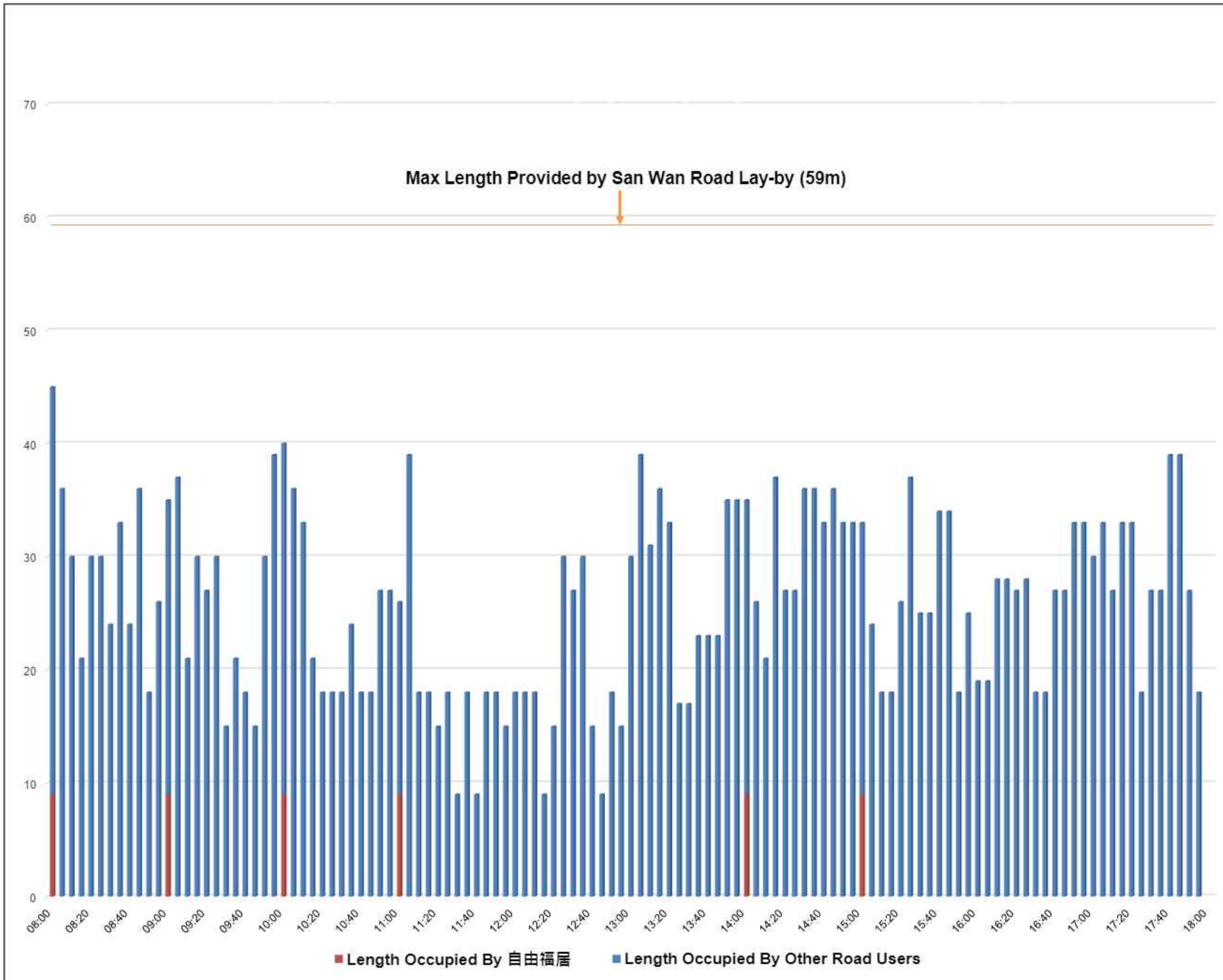
Scale : **N.T.S**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG 4.3.DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

YEAR 2024 OBSERVED LAY-BY OCCUPANCY

FIGURE 4.4

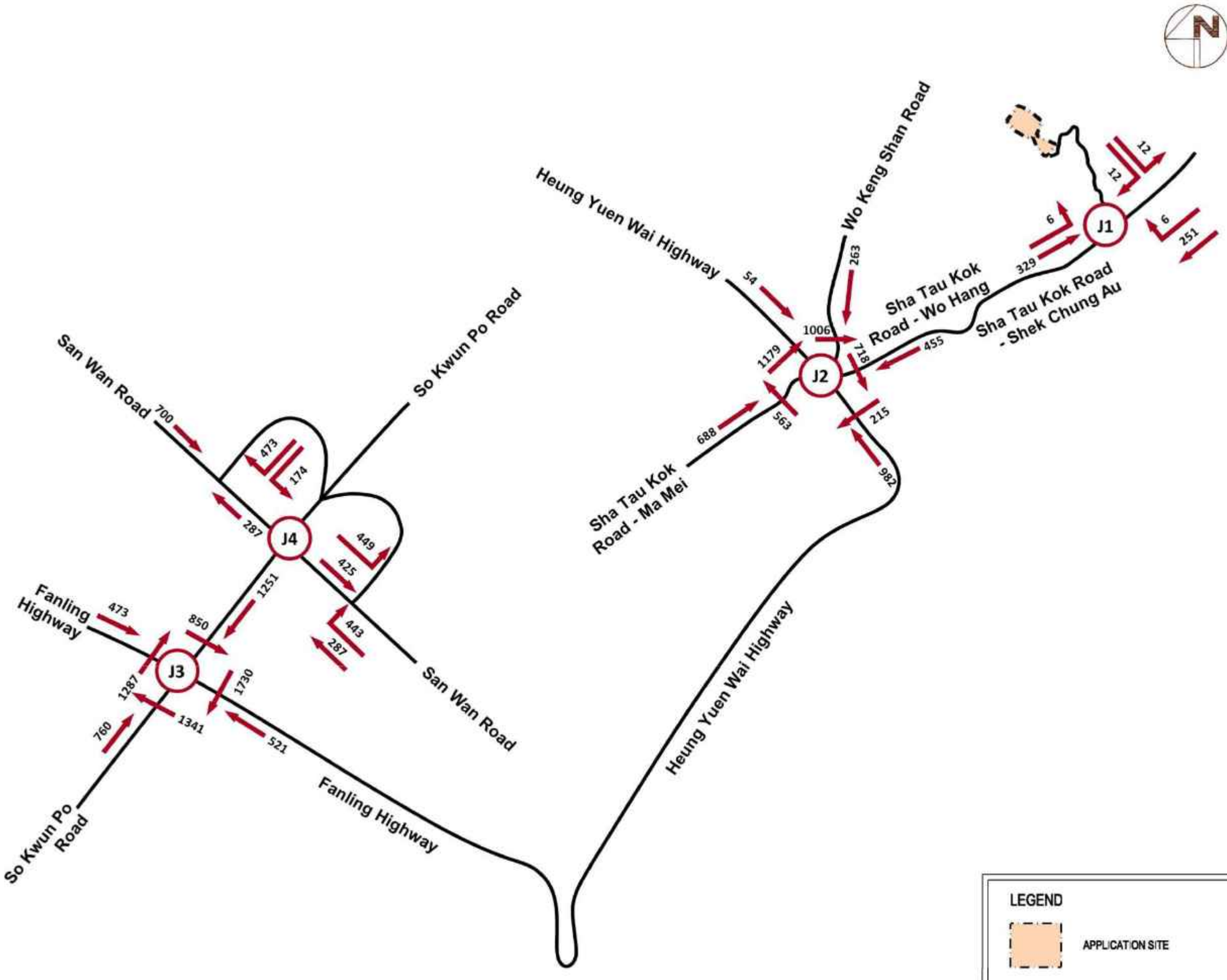
Scale : **N.T.S**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECT\31041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAW\MD\REPORT DRAW\MD\F.G 4.4.DWG



LEGEND

APPLICATION SITE

100 TRAFFIC FLOW IN PCU/HR AT PEAK HOUR

Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

YEAR 2028 REFERENCE TRAFFIC FLOW

FIGURE 5.1

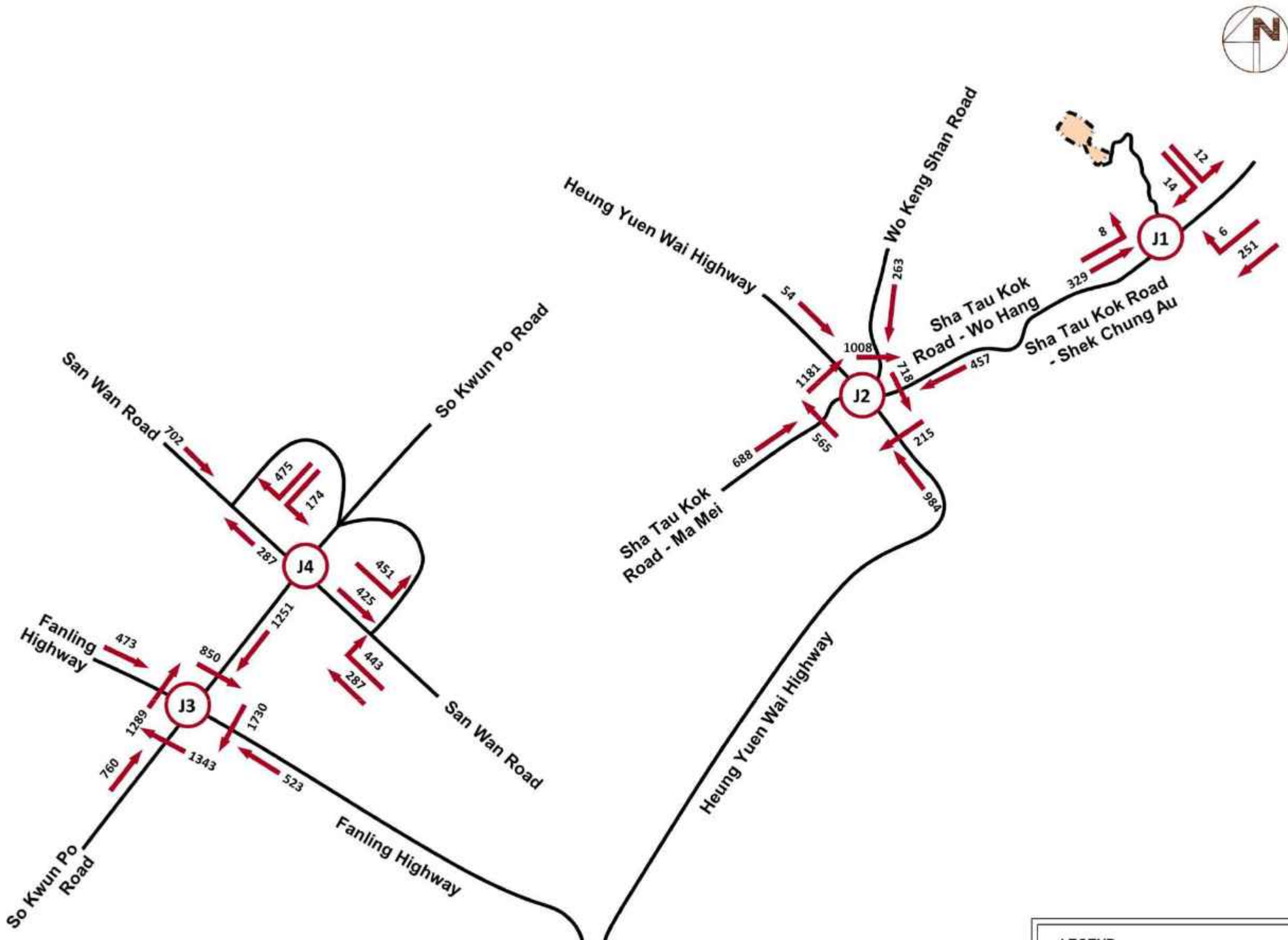
Scale : **N.T.S**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG 5.1.DWG



LEGEND

APPLICATION SITE

100 TRAFFIC FLOW IN PCU/HR AT PEAK HOUR

Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

YEAR 2028 DESIGN TRAFFIC FLOW

FIGURE 5.2

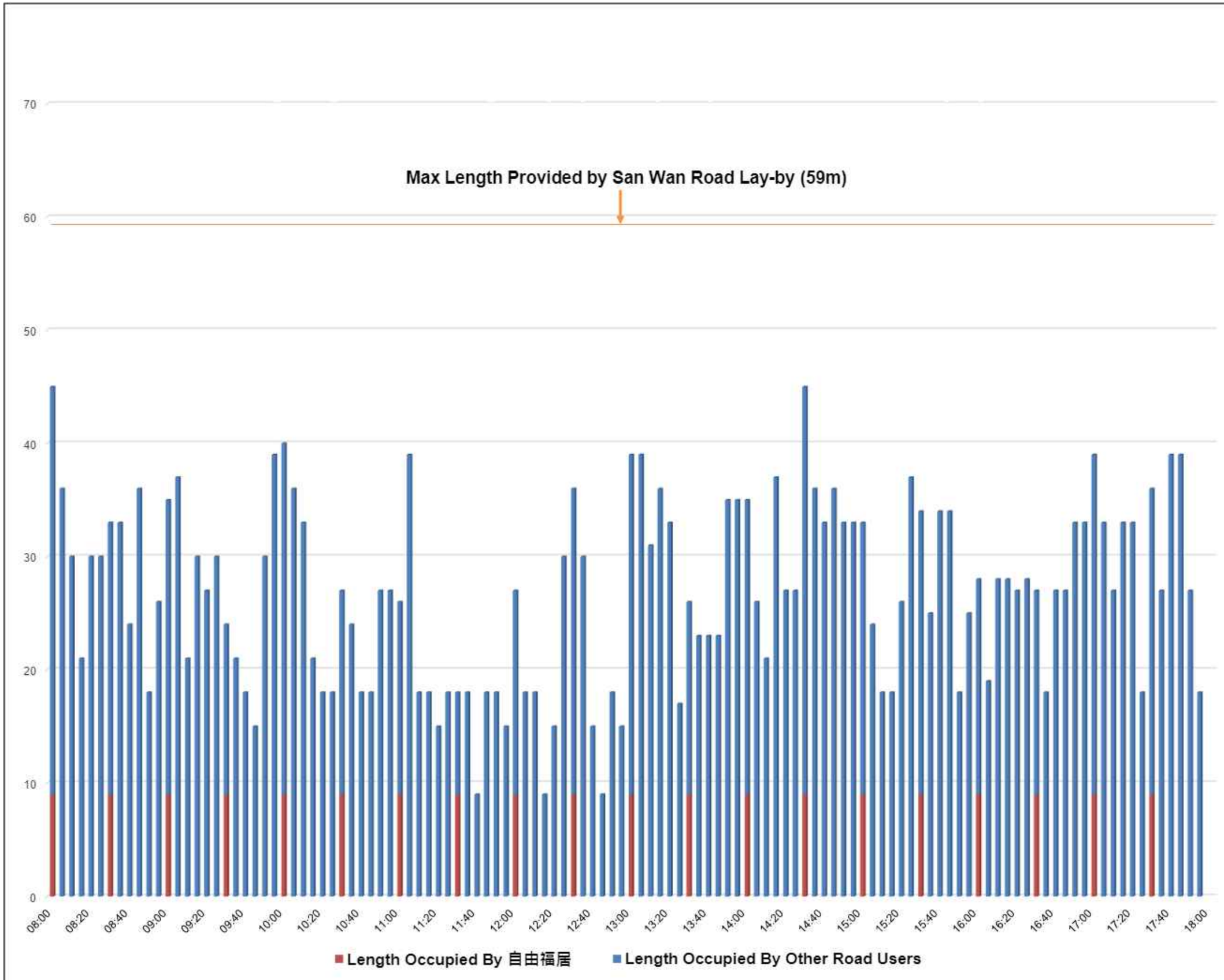
Scale : **N.T.S**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG 5.2.DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

YEAR 2028 DESIGN LAY-BY OCCUPANCY

FIGURE 5.3

Scale : **N.T.S**

Date : **JUL 2024**

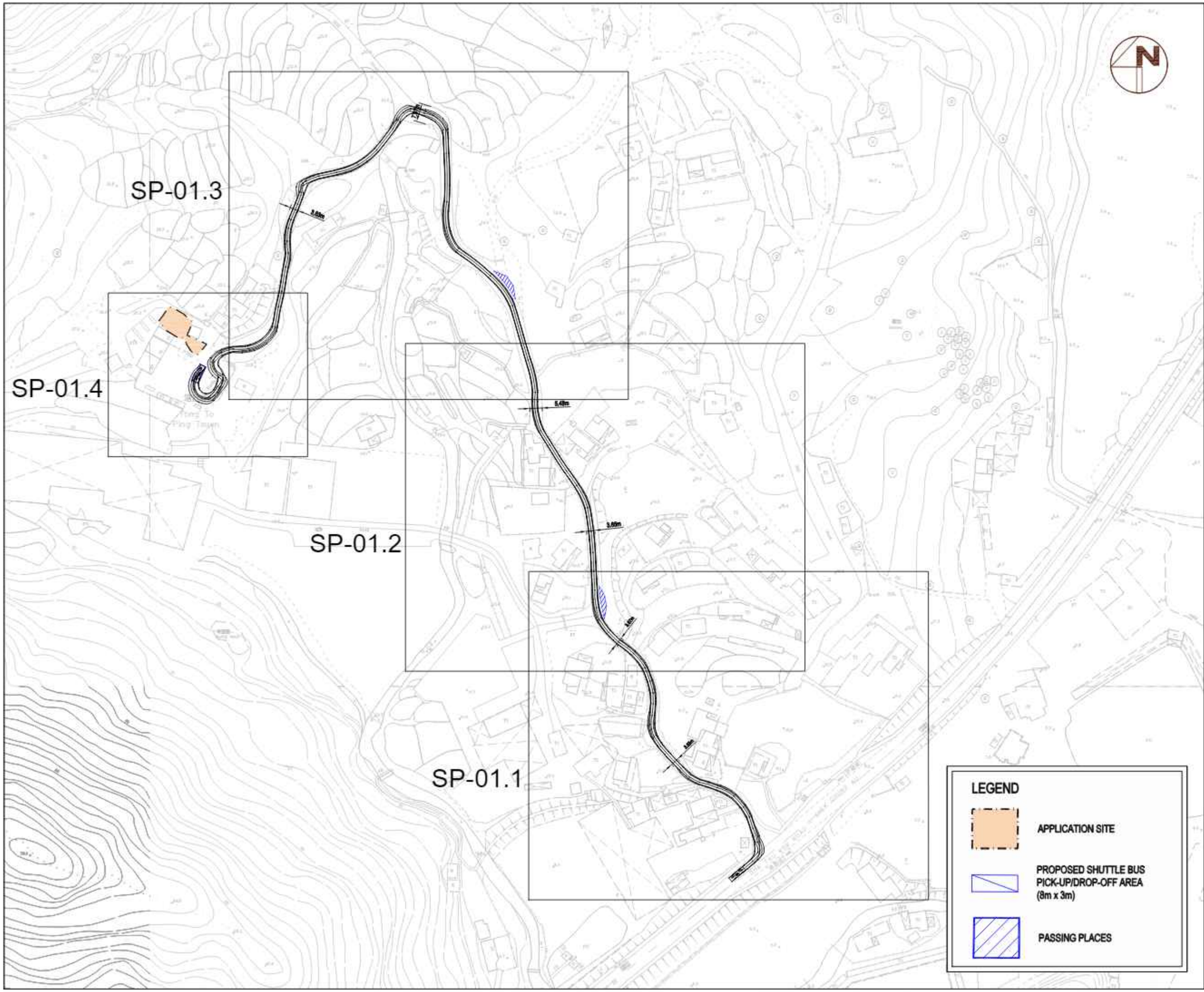
Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECT\31041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAW\MD\REPORT DRAW MXD\F 5.3.DWG

Appendix A

Swept Path Analysis



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SWEPT PATH ANALYSIS FOR 7.7m SHUTTLE BUS (INGRESS)

FIGURE SP-01

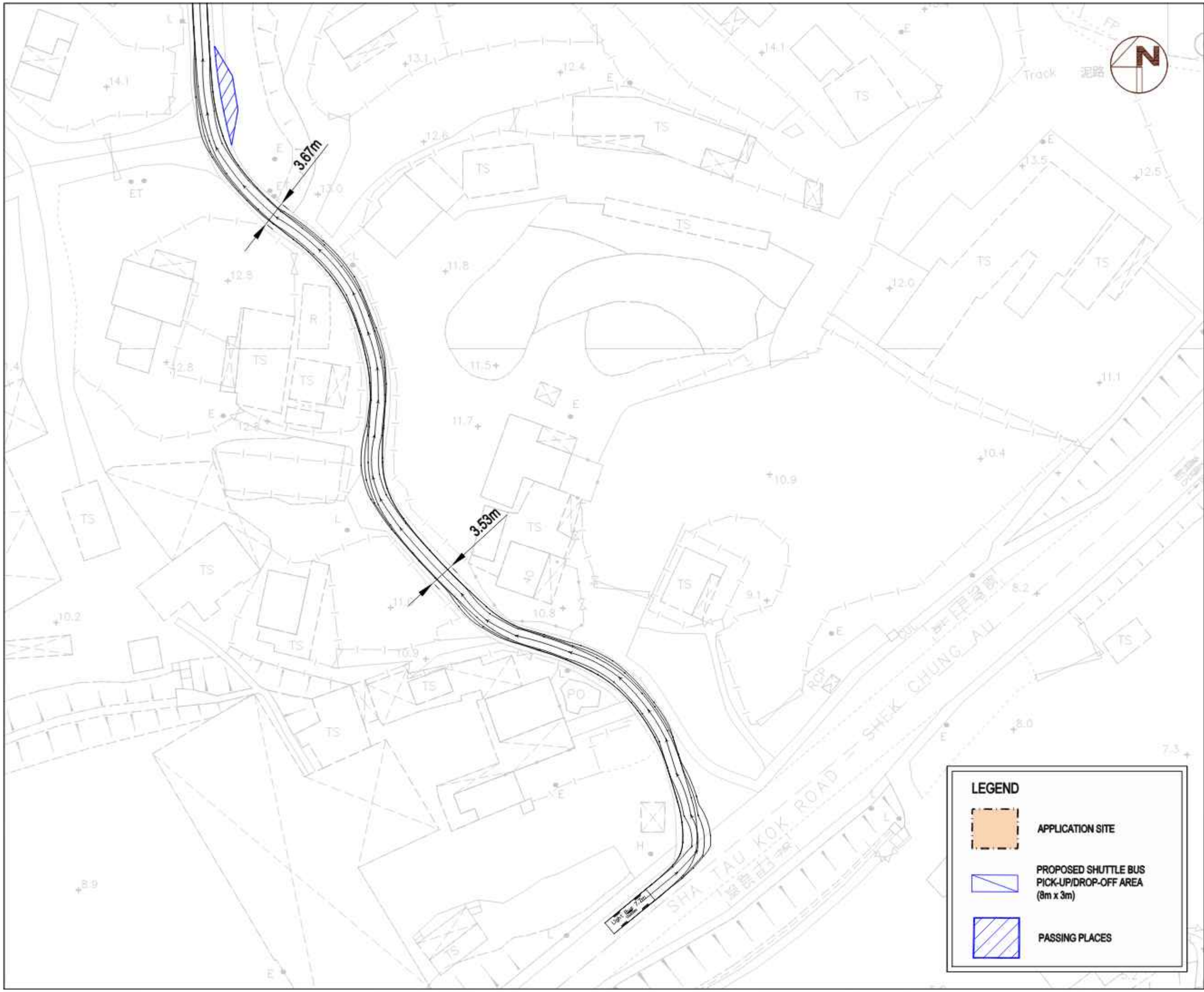
Scale : **1:1500 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECT\31041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG-SP01_SWEPT ANALYSIS FOR 7.7M LIGHT BUS (INGRESS).DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SWEPT PATH ANALYSIS FOR 7.7m SHUTTLE BUS (INGRESS)

FIGURE SP-01.1

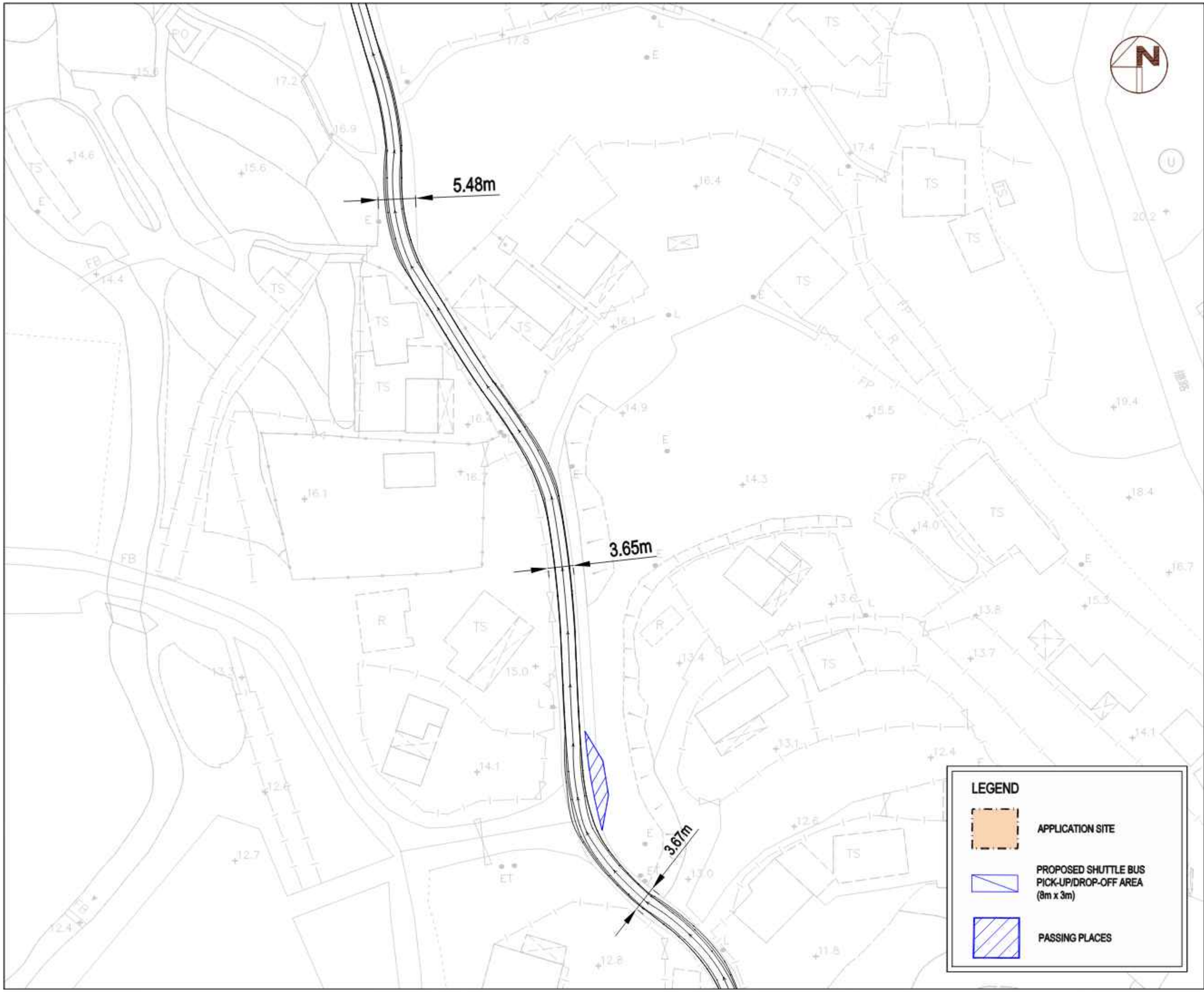
Scale : **1:500 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECT\31041 COLUMBARIUM DEVELOPMENT AT TONG TO PH6 TSUEN\DATA\DRAWING\REPORT DRAWING\FIG-SP01_SWEPT ANALYSIS FOR 7.7M LIGHT BUS (INGRESS).DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SWEPT PATH ANALYSIS FOR 7.7m SHUTTLE BUS (INGRESS)

FIGURE SP-01.2

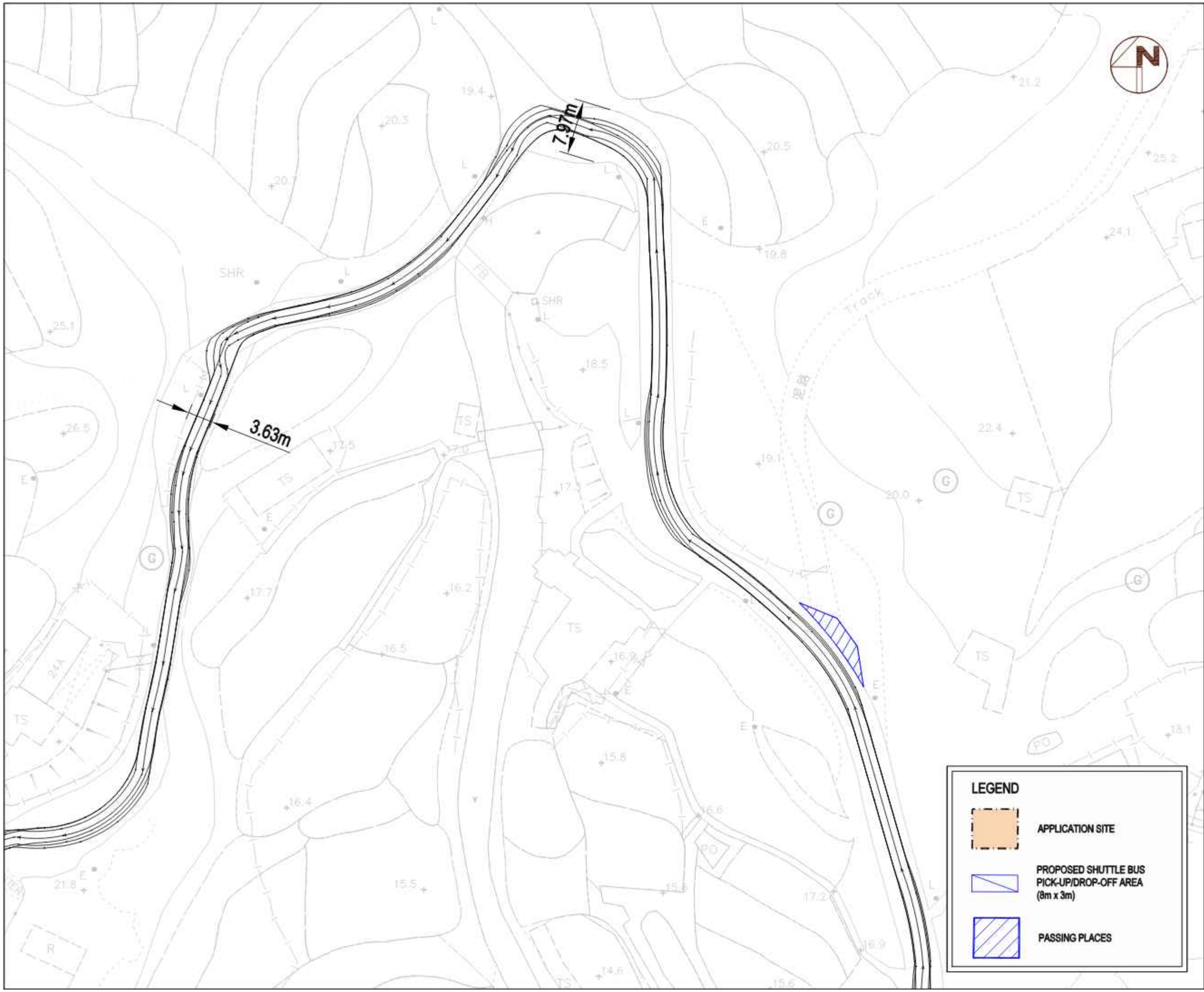
Scale : **1:500 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECT\31041 COLUMBARIUM DEVELOPMENT AT TONG TO PH6 TSUEN\DATA\DRAWING\REPORT DRAWING\FIG-SP01_SWEPT ANALYSIS FOR 7.7M LIGHT BUS (INGRESS).DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SWEPT PATH ANALYSIS FOR 7.7m SHUTTLE BUS (INGRESS)

FIGURE SP-01.3

Scale : **1:500 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECT\31041 COLUMBARIUM DEVELOPMENT AT TONG TO PH6\ TSUE\NDATA\DRAWING\REPORT DRAWING\FIG-SP\01_SWEPT ANALYSIS FOR 7.7M LIGHT BUS (INGRESS).DWG

Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SWEPT PATH ANALYSIS FOR 7.7m SHUTTLE BUS (INGRESS)

FIGURE SP-01.4

LEGEND

- APPLICATION SITE
- PROPOSED SHUTTLE BUS PICK-UP/DROP-OFF AREA (8m x 3m)
- PASSING PLACES

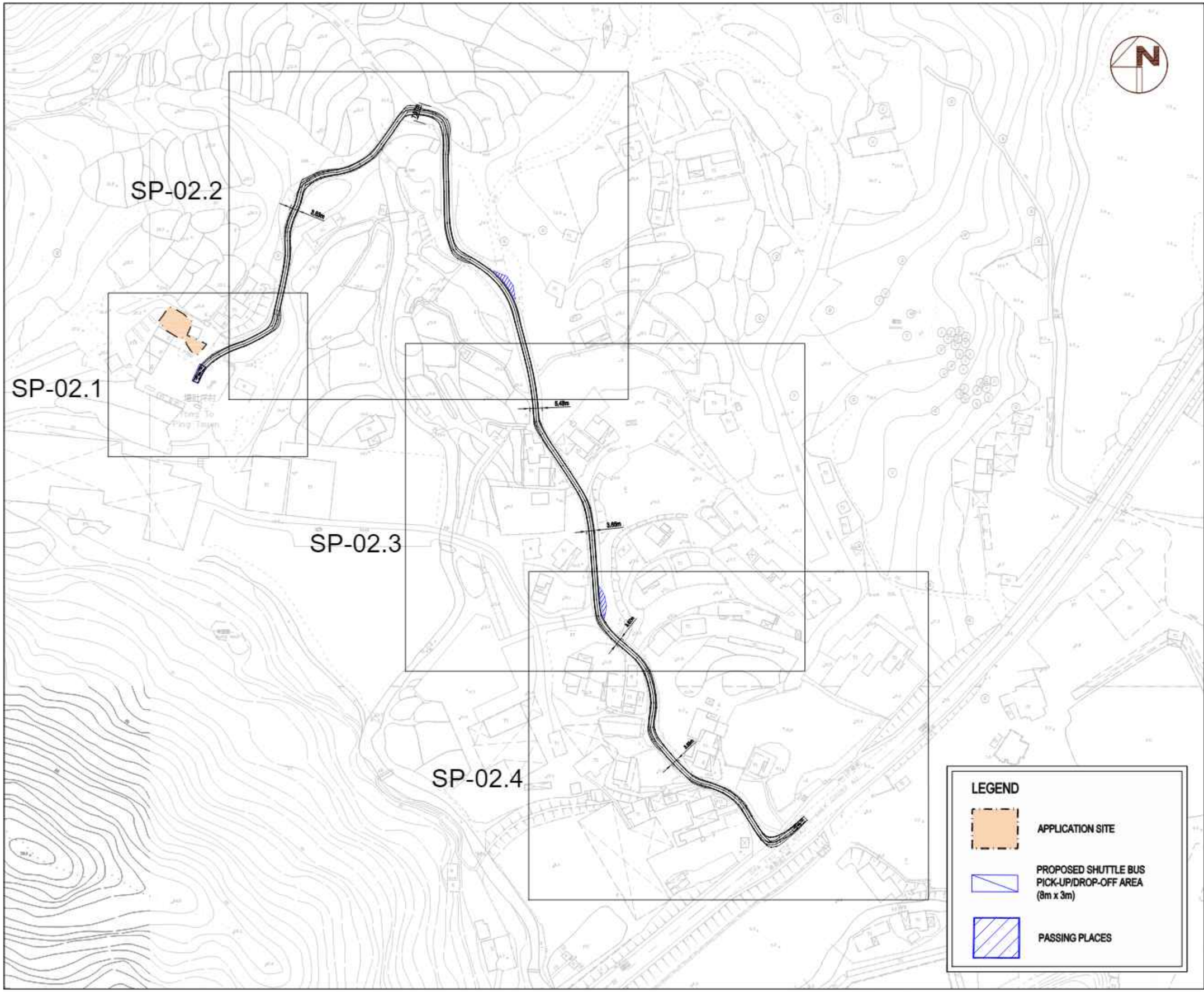
Scale : **1:250 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECT\31041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG-SP01_SWEPT ANALYSIS FOR 7.7M LIGHT BUS (INGRESS).DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SWEPT PATH ANALYSIS FOR 7.7m SHUTTLE BUS (EGRESS)

FIGURE SP-02

Scale : **1:1500 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1641 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG-SP02_SWEPT ANALYSIS FOR 7.7M LIGHT BUS (EGRESS).DWG

Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SWEPT PATH ANALYSIS FOR 7.7m SHUTTLE BUS (EGRESS)

FIGURE SP-02.1

塘肚坪村

Tong To

Ping Tsuen

LEGEND

APPLICATION SITE

PROPOSED SHUTTLE BUS PICK-UP/DROP-OFF AREA (8m x 3m)

PASSING PLACES

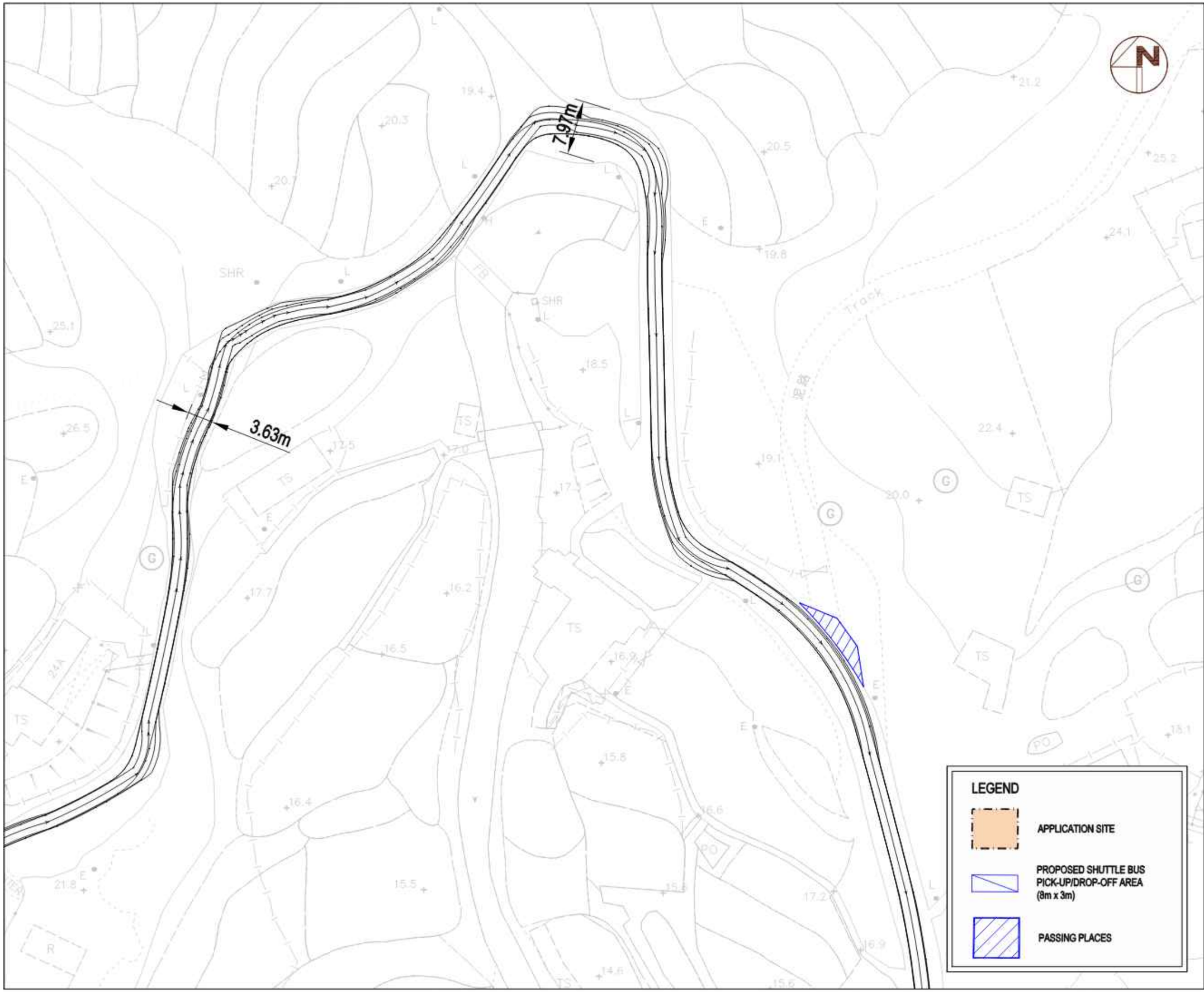
Scale : **1:250 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG-SP02_SWEPT ANALYSIS FOR 7.7M LIGHT BUS (EGRESS).DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SWEPT PATH ANALYSIS FOR 7.7m SHUTTLE BUS (EGRESS)

FIGURE SP-02.2

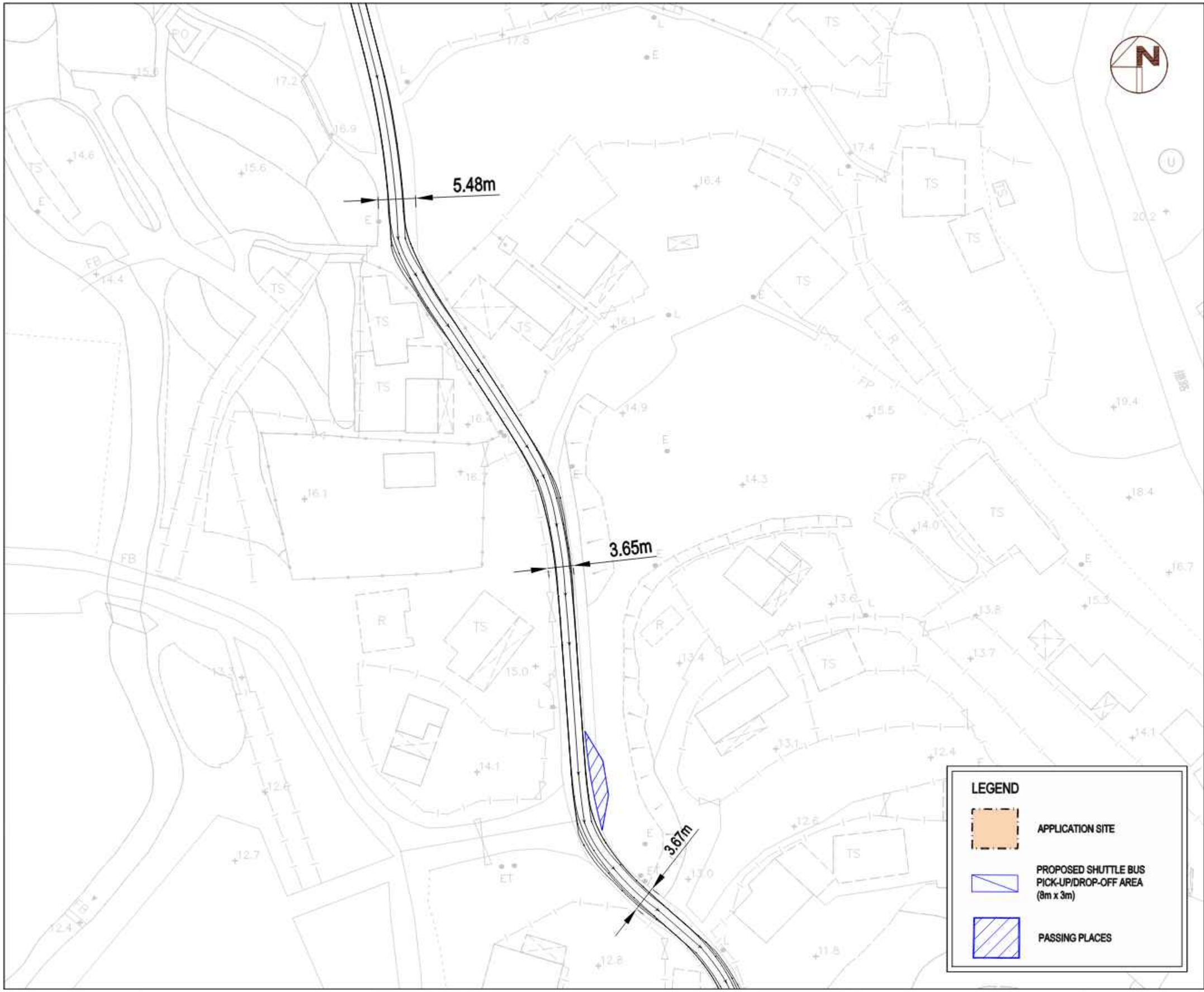
Scale : **1:500 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1041 COLUMBARIUM DEVELOPMENT AT TONG TO PH6\6 TSUEN\DATA\DRAWING\REPORT DRAWING\FIG-SP02_SWEPT ANALYSIS FOR 7.7M LIGHT BUS (EGRESS).DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SWEPT PATH ANALYSIS FOR 7.7m SHUTTLE BUS (EGRESS)

FIGURE SP-02.3

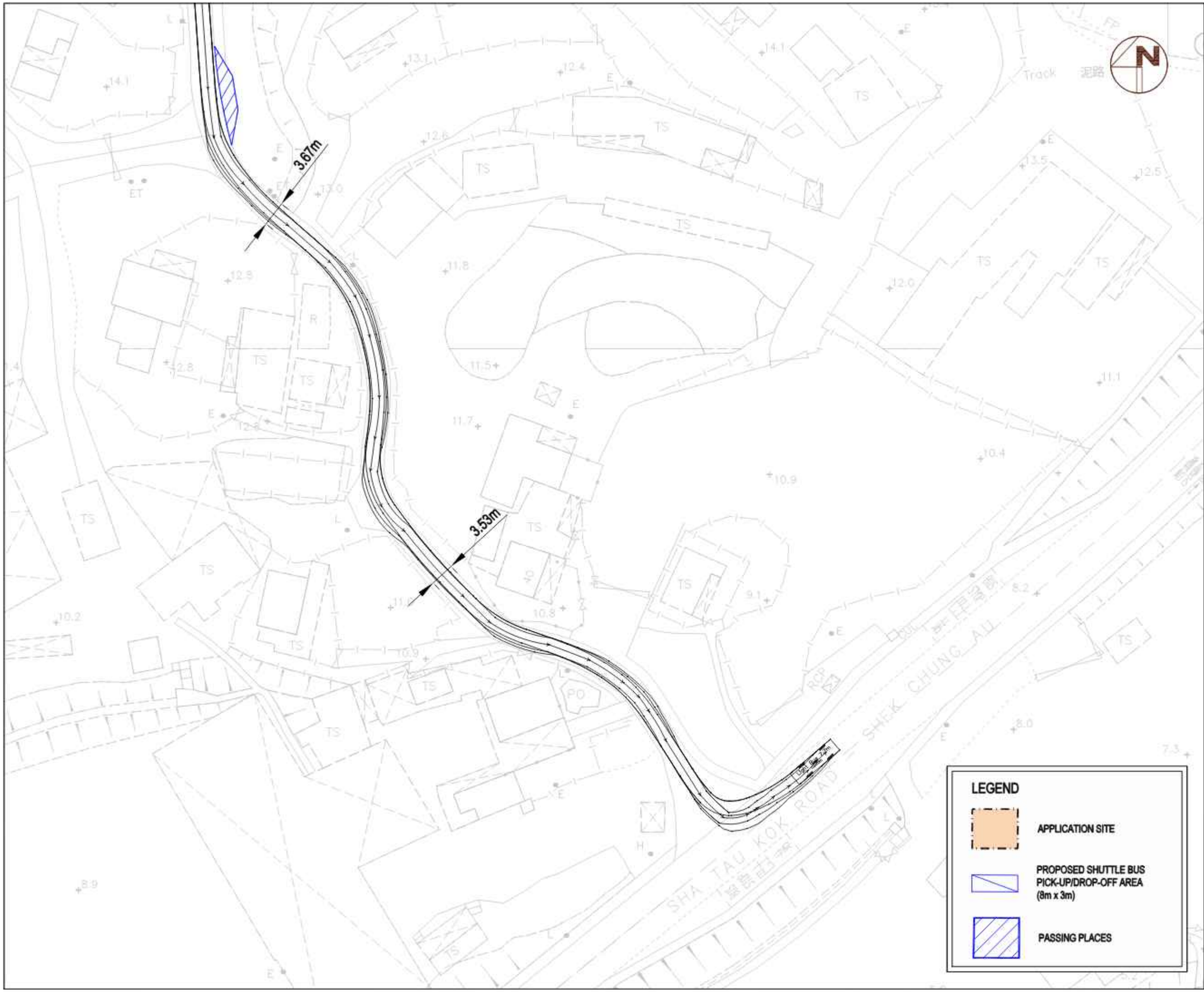
Scale : **1:500 (A3)**

Date : **JUL 2024**

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DAT\AD\RAW\REPORT DRAWING\FIG-SP02_SWEPT ANALYSIS FOR 7.7M LIGHT BUS (EGRESS).DWG



Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B (Part) and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories

SWEPT PATH ANALYSIS FOR 7.7m SHUTTLE BUS (EGRESS)

FIGURE SP-02.4

Scale : **1:500 (A3)**

Date : **JUL 2024**

Rev. :

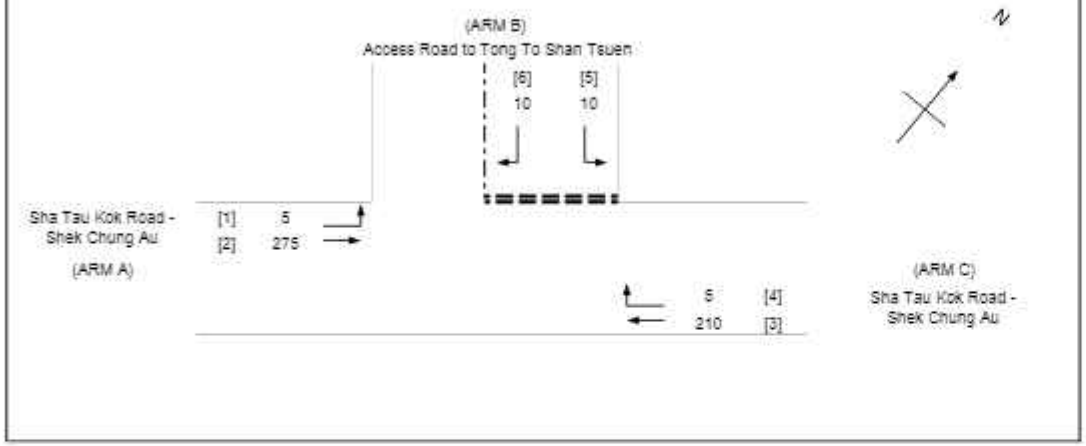
AXON CONSULTANCY
http://www.axonhk.com

X:\PROJECTS\1041 COLUMBARIUM DEVELOPMENT AT TONG TO PING TSUEN\DATA\DRAWING\REPORT DRAWING\FIG-SP02_SWEPT ANALYSIS FOR 7.7M LIGHT BUS (EGRESS).DWG

Appendix B

Junction Analysis

AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	JK	26/7/2024
			Checked By:	SY	26/7/2024
J1 - Sha Tau Kok Road - Shek Chung Au / Access Road to Tong To Shan Tsuen	2024 Observed Traffic Flow	Project No.: 31041	Reviewed By:	AW	26/7/2024



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	=	7.0	(metres)
W cr	=	0	(metres)
q a-b	=	5	(pcu/hr)
q a-c	=	275	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.1	(metres)
Vr c-b	=	25	(metres)
q c-a	=	210	(pcu/hr)
q c-b	=	5	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.0	(metres)
W b-c	=	3.0	(metres)
Vl b-a	=	25	(metres)
Vr b-a	=	25	(metres)
Vr b-c	=	25	(metres)
q b-a	=	10	(pcu/hr)
q b-c	=	10	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.794
E	=	0.859
F	=	0.751
Y	=	0.759
F for (Qb-ac)	=	0.5

THE CAPACITY OF MOVEMENT :

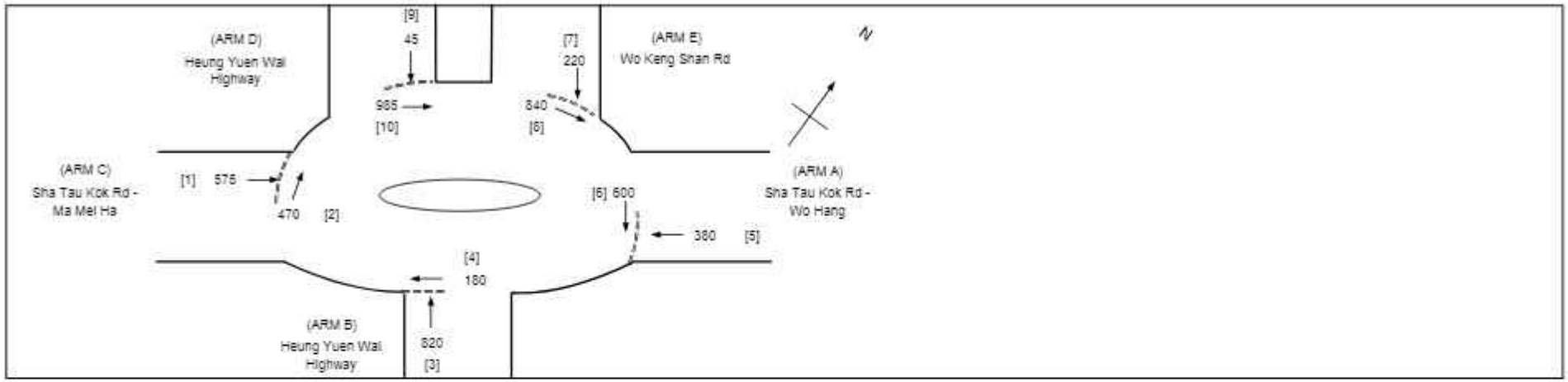
Q b-a	=	407	(pcu/hr)
Q b-c	=	574	(pcu/hr)
Q c-b	=	522	(pcu/hr)
Q b-ac	=	476	(pcu/hr)
Q c-a	=	1783	(pcu/hr)
TOTAL FLOW	=	515	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0245
DFC b-c	=	0.0174
DFC c-b	=	0.0096
DFC b-ac (Share Lane)	=	0.0420
DFC c-a	=	0.1178

CRITICAL DFC = 0.12

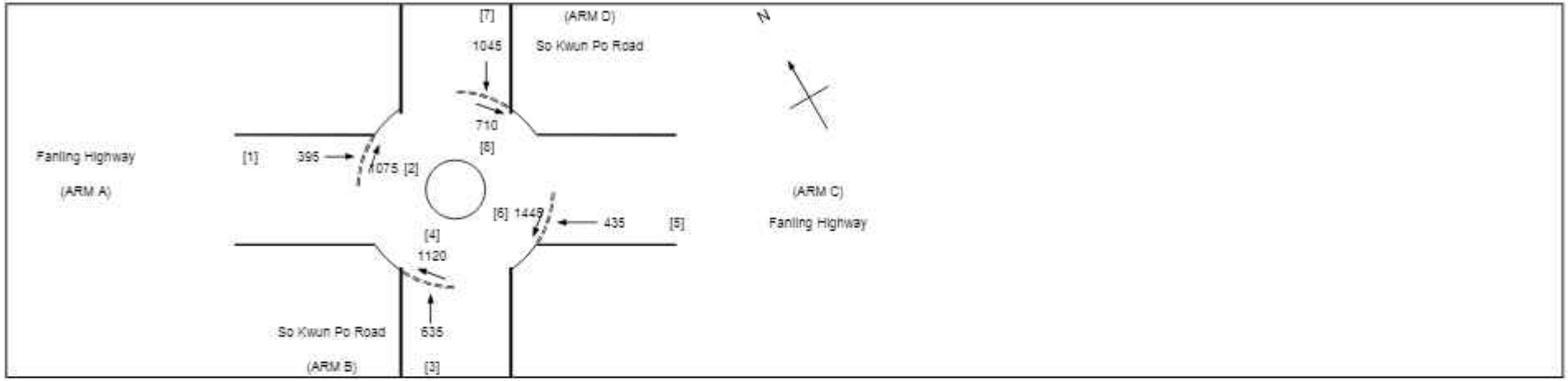
AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.A and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	GY	七月-2024
			Checked By:	JK	七月-2024
J2 - Heung Yuen Wai Highway / Sha Tau Kok Road – Wo Hang / Sha Tau Kok Road – Ma Me	2024 Observed Traffic Flow	Project No.: 31041	Reviewed By:	SF	七月-2024



GEOMETRIC DETAILS:			ARM	A	B	C	D	E
V	=	Approach half width (m)		4.0	4.0	3.7	4.0	3.7
E	=	Entry width (m)		9.5	10.0	9.5	10.0	9.5
L	=	Effective length of flare (m)		29.0	32.0	19.0	50.0	18.0
R	=	Entry radius (m)		30.0	60.0	40.0	40.0	60.0
D	=	Inscribed circle diameter (m)		100.0	100.0	100.0	100.0	100.0
A	=	Entry angle (degree)		40.0	40.0	40.0	40.0	30.0
Q	=	Entry flow (pcu/h)		380	820	575	45	220
Qc	=	Circulating flow across entry (pcu/h)		600	180	470	985	840
OUTPUT PARAMETERS:								
S	=	Sharpness of flare = 1.6(E-V)/L		0.30	0.30	0.49	0.19	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		0.98	1.00	0.99	0.99	1.03
X2	=	V + ((E-V)/(1+2S))		7.42	7.75	6.83	8.34	6.56
M	=	EXP((D-60)/10)		54.60	54.60	54.60	54.60	54.60
F	=	303*X2		2249	2348	2010	2526	1986
Td	=	1+(0.5/(1+M))		1.01	1.01	1.01	1.01	1.01
Fc	=	0.21*Td(1+0.2*X2)		0.53	0.54	0.49	0.57	0.49
Qe	=	K(F-Fc*Qc)		1698	2245	1760	1949	1626
DFC	=	Design flow/Capacity = Q/Qe		0.20	0.37	0.33	0.02	0.14

TOTAL FLOW	=	4055	(pcu/hr)
CRITICAL DFC	=	0.37	

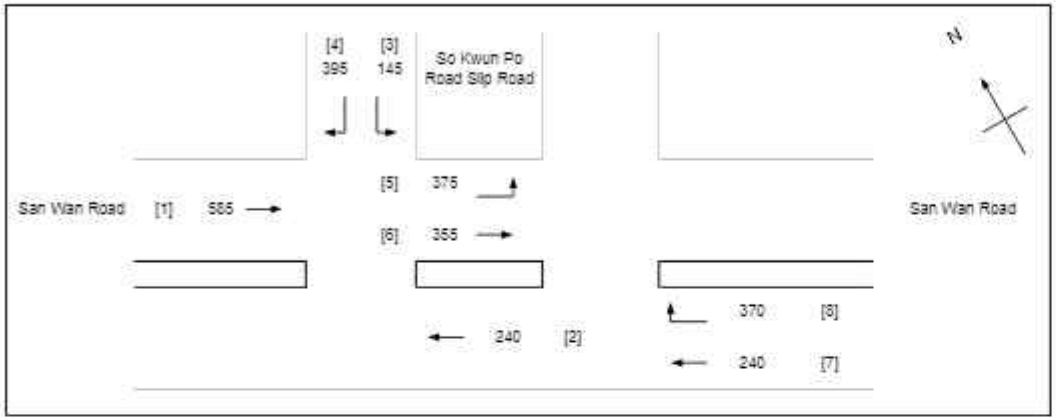
AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.A and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	JK	2024年7月26日
			Checked By:	SF	2024年7月26日
J3 - Fanling Highway / So Kwun Po Road	2024 Observed Traffic Flow	Project No.: 31041	Reviewed By:	SF	2024年7月26日



GEOMETRIC DETAILS:			ARM	A	B	C	D
V	=	Approach half width (m)		3.5	4.4	4.5	8.1
E	=	Entry width (m)		7.4	5.4	6.7	11.0
L	=	Effective length of flare (m)		20.7	7.6	53.5	7.4
R	=	Entry radius (m)		81.0	36.0	100.0	20.0
D	=	Inscribed circle diameter (m)		100.0	88.0	100.0	60.0
A	=	Entry angle (degree)		23.0	21.0	12.0	30.0
Q	=	Entry flow (pcu/h)		395	635	435	1045
Qc	=	Circulating flow across entry (pcu/h)		1075	1120	1445	710
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L		0.30	0.21	0.07	0.63
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.06	1.05	1.10	1.00
X2	=	V + ((E-V)/(1+2S))		5.93	5.10	6.44	9.39
M	=	EXP((D-60)/10)		54.60	16.44	54.60	1.00
F	=	303*X2		1798	1546	1953	2844
Td	=	1+(0.5/(1+M))		1.01	1.03	1.01	1.25
Fc	=	0.21*Td(1+0.2*X2)		0.46	0.44	0.48	0.76
Qe	=	K(F-Fc*Qc)		1379	1114	1379	2308
Qe grade	=	K(1.11F-1.4Fc*Qc)		1378	1087	1307	2406
DFC	=	Design flow/Capacity = Q/Qe		0.29	0.58	0.33	0.43

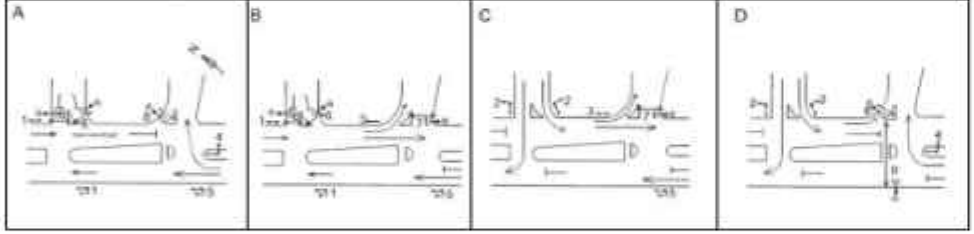
TOTAL FLOW	=	6860 (pcu/hr)
CRITICAL DFC	=	0.58

AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	JK	26/7/2024
			Checked By:	SY	26/7/2024
J4 - San Wan Road / So Kwun Po Road Slip Road	2024 Observed Traffic Flow	Project No.: 31041	Reviewed By:	AW	26/7/2024



No. of critical vehicluar phase per cycle:		N =	2	
Intergreen Period	Stage A - B	I =	6	sec
	Stage B - C	I =	0	sec
	Stage C - D	I =	5	sec
	Stage D - A	I =	0	sec
Cycle time		C =	68	sec
Sum(y)		Y =	0.372	
Loss time		L =	11	sec
Total Flow		=	2705	pcu
Co	= (1.5*L+5)/(1-Y)	=	34.2	sec
Cm	= L/(1-Y)	=	17.5	sec
Yult	= 0.9-0.0075L	=	0.616	
R.C.ult	= (Yult-Y)/Y*100%	=	119.9	%
Cp	= 0.9*L/(0.9-Y)	=	16.7	sec
Ymax	= 1-L/C	=	0.875	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	111.8	%

Existing Method of Control



Pedestrian Phase	Width (m)	Stage no.	Green Time Required (s) SG	FG	Green Time Provided (s) SG	FG	Check
6		A,B	7	5	28	5	OK
7		B,C	7	6	40	6	OK
8		D,A	7	5	29	5	OK
9		D	6	7	16	7	OK

	Movement	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Left Flow pcu/h	Straight Flow pcu/h	Right Flow pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m	Flare lane Effect	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 (sec)
↑	1	A,B	3.5	1	2				4210		585		585	0.00	4210			4210	0.139			29	31	0.394	23	22
↑	2	A,B	3.5	1	2				4210		240		240	0.00	4210			4210	0.057			12	31	0.162	10	20
↱	4	C,D	3.5	2	1	20			2105			395	395	1.00	1958			1958	0.202			42	45	0.394	24	14
↰	3	C,D	3.5	2	1	15			2105	145			145	1.00	1914			1914	0.076			16	45	0.148	9	12
↳	5	B,C	3.5	3	1	15			2105			375	375	1.00	1914			1914	0.196	0.196		41	53	0.325	18	9
↑	6	B,C	3.5	3	2				4210		355		355	0.00	4210			4210	0.084			17	53	0.140	9	8
↰	8	D,A	3.5	4	1	20			2105		370		370	0.00	2105			2105	0.176	0.176		36	32	0.483	29	23
←	7	A,B,C	3.5	5	2				4210		240		240	0.00	4210			4210	0.057			12	59	0.085	5	5

X:\Project\31041 Columbarium development at Tong To Ping Tsuen\Data\Calculation\[31041 - Junction_OBS.xlsx]J4

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

AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	JK	26/7/2024
			Checked By:	SY	26/7/2024
J1 - Sha Tau Kok Road - Shek Chung Au / Access Road to Tong To Shan Tsuen	2026 Reference Traffic Flow	Project No.: 31041	Reviewed By:	AW	26/7/2024

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	=	7.0	(metres)
W cr	=	0	(metres)
q a-b	=	6	(pcu/hr)
q a-c	=	329	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.1	(metres)
Vr c-b	=	25	(metres)
q c-a	=	251	(pcu/hr)
q c-b	=	6	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.0	(metres)
W b-c	=	3.0	(metres)
Vl b-a	=	25	(metres)
Vr b-a	=	25	(metres)
Vr b-c	=	25	(metres)
q b-a	=	12	(pcu/hr)
q b-c	=	12	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.794
E	=	0.859
F	=	0.751
Y	=	0.759
F for (Qb-ac)	=	0.5

THE CAPACITY OF MOVEMENT :

Q b-a	=	389 (pcu/hr)
Q b-c	=	561 (pcu/hr)
Q c-b	=	510 (pcu/hr)
Q b-ac	=	459 (pcu/hr)
Q c-a	=	1779 (pcu/hr)
TOTAL FLOW	=	616 (pcu/hr)

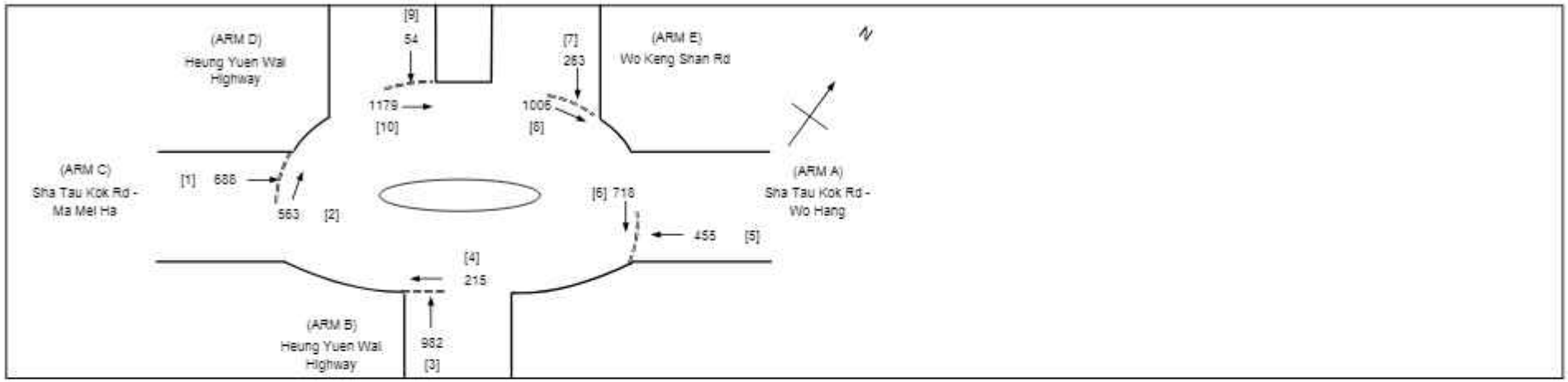
COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0308
DFC b-c	=	0.0214
DFC c-b	=	0.0118
DFC b-ac (Share Lane)	=	0.0522
DFC c-a	=	0.1411

CRITICAL DFC = 0.14

AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.A and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories		Prepared By:	GY	七月-2024
		Checked By:	JK	七月-2024
J2 - Heung Yuen Wai Highway / Sha Tau Kok Road – Wo Hang / Sha Tau Kok Road – Ma Me	2028 Reference Traffic Flow	Reviewed By:	SF	七月-2024

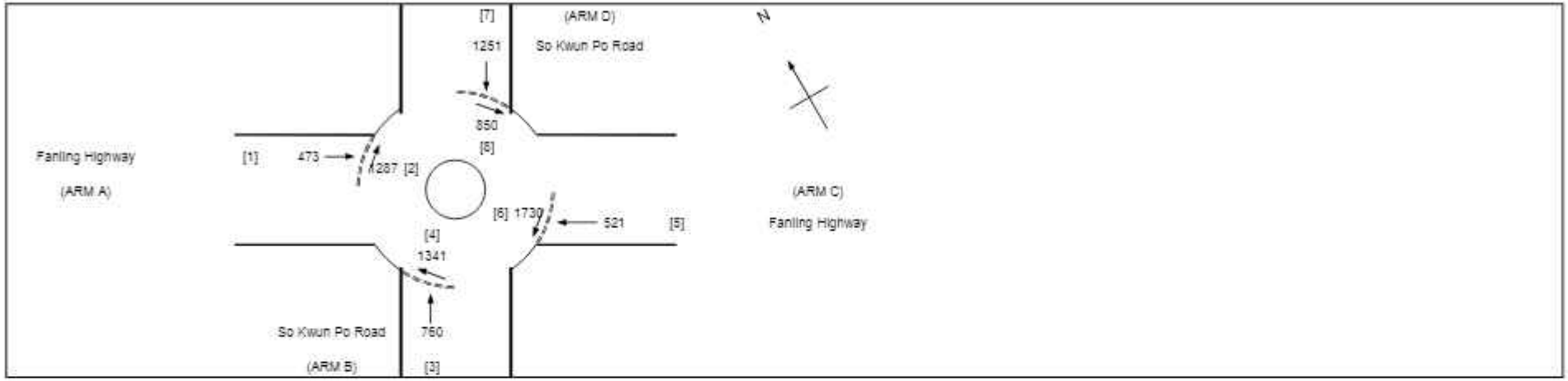
Project No.: 31041



GEOMETRIC DETAILS:			ARM	A	B	C	D	E
V	=	Approach half width (m)		4.0	4.0	3.7	4.0	3.7
E	=	Entry width (m)		9.5	10.0	9.5	10.0	9.5
L	=	Effective length of flare (m)		29.0	32.0	19.0	50.0	18.0
R	=	Entry radius (m)		30.0	60.0	40.0	40.0	60.0
D	=	Inscribed circle diameter (m)		100.0	100.0	100.0	100.0	100.0
A	=	Entry angle (degree)		40.0	40.0	40.0	40.0	30.0
Q	=	Entry flow (pcu/h)		455	982	688	54	263
Qc	=	Circulating flow across entry (pcu/h)		718	215	563	1179	1006
OUTPUT PARAMETERS:								
S	=	Sharpness of flare = 1.6(E-V)/L		0.30	0.30	0.49	0.19	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		0.98	1.00	0.99	0.99	1.03
X2	=	V + ((E-V)/(1+2S))		7.42	7.75	6.83	8.34	6.56
M	=	EXP((D-60)/10)		54.60	54.60	54.60	54.60	54.60
F	=	303*X2		2249	2348	2010	2526	1986
Td	=	1+(0.5/(1+M))		1.01	1.01	1.01	1.01	1.01
Fc	=	0.21*Td(1+0.2*X2)		0.53	0.54	0.49	0.57	0.49
Qe	=	K(F-Fc*Qc)		1837	2227	1715	1840	1542
DFC	=	Design flow/Capacity = Q/Qe		0.25	0.44	0.40	0.03	0.17

TOTAL FLOW = 4854 (pcu/hr)
CRITICAL DFC = 0.44

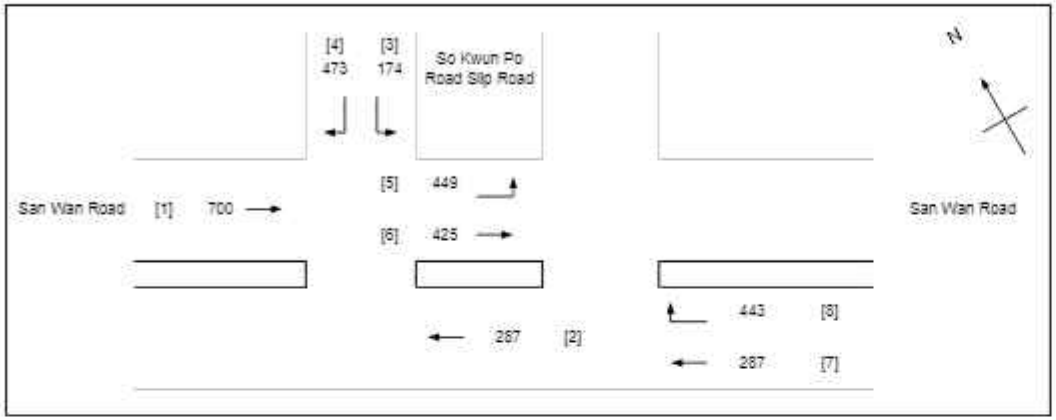
AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.A and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	JK	2024年7月26日
			Checked By:	SF	2024年7月26日
J3 - Fanling Highway / So Kwun Po Road	2028 Reference Traffic Flow	Project No.: 31041	Reviewed By:	SF	2024年7月26日



GEOMETRIC DETAILS:			ARM	A	B	C	D
V	=	Approach half width (m)		3.5	4.4	4.5	8.1
E	=	Entry width (m)		7.4	5.4	6.7	11.0
L	=	Effective length of flare (m)		20.7	7.6	53.5	7.4
R	=	Entry radius (m)		81.0	36.0	100.0	20.0
D	=	Inscribed circle diameter (m)		100.0	88.0	100.0	60.0
A	=	Entry angle (degree)		23.0	21.0	12.0	30.0
Q	=	Entry flow (pcu/h)		473	760	521	1251
Qc	=	Circulating flow across entry (pcu/h)		1287	1341	1730	850
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L		0.30	0.21	0.07	0.63
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.06	1.05	1.10	1.00
X2	=	V + ((E-V)/(1+2S))		5.93	5.10	6.44	9.39
M	=	EXP((D-60)/10)		54.60	16.44	54.60	1.00
F	=	303*X2		1798	1546	1953	2844
Td	=	1+(0.5/(1+M))		1.01	1.03	1.01	1.25
Fc	=	0.21*Td(1+0.2*X2)		0.46	0.44	0.48	0.76
Qe	=	K(F-Fc*Qc)		1275	1012	1227	2202
Qe grade	=	K(1.11F-1.4Fc*Qc)		1232	945	1094	2258
DFC	=	Design flow/Capacity = Q/Qe		0.38	0.80	0.48	0.55

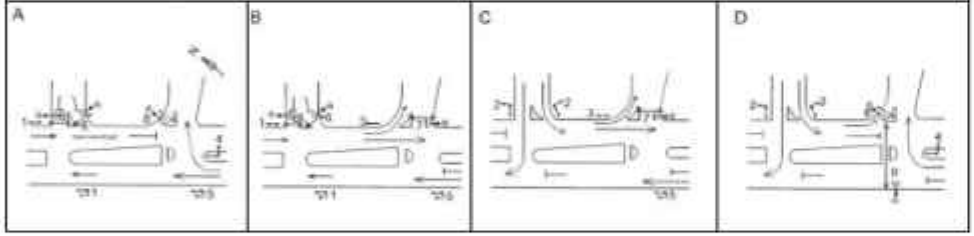
TOTAL FLOW	=	8213 (pcu/hr)
CRITICAL DFC	=	0.80

AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	JK	26/7/2024
			Checked By:	SY	26/7/2024
J4 - San Wan Road / So Kwun Po Road Slip Road	2028 Reference Traffic Flow	Project No.: 31041	Reviewed By:	AW	26/7/2024



No. of critical vehicluar phase per cycle:		N =	2		
Intergreen Period	Stage A - B	I =	6	sec	
	Stage B - C	I =	0	sec	
	Stage C - D	I =	5	sec	
	Stage D - A	I =	0	sec	
Cycle time		C =	68	sec	
Sum(y)		Y =	0.445		
Loss time		L =	11	sec	
Total Flow		=	3238	pcu	
Co	= (1.5*L+5)/(1-Y)	=	38.7	sec	
Cm	= L/(1-Y)	=	19.8	sec	
Yult	= 0.9-0.0075L	=	0.816		
R.C.ult	= (Yult-Y)/Y*100%	=	83.7	%	
Cp	= 0.9*L/(0.9-Y)	=	21.6	sec	
Ymax	= 1-L/C	=	0.875		
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	76.9	%	

Existing Method of Control



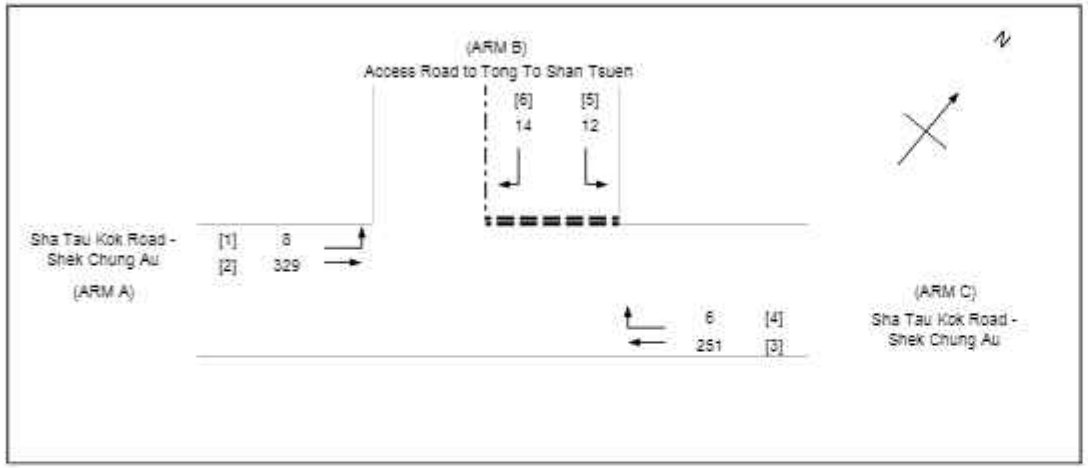
Pedestrian Phase	Width (m)	Stage no.	Green Time Required (s) SG	Green Time Required (s) FG	Green Time Provided (s) SG	Green Time Provided (s) FG	Check
6		A,B	7	5	28	5	OK
7		B,C	7	6	40	6	OK
8		D,A	7	5	29	5	OK
9		D	6	7	16	7	OK

	Movement	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Left Flow pcu/h	Straight Flow pcu/h	Right Flow pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m	Flare lane Effect	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 (sec)
→	1	A,B	3.5	1	2				4210		700		700	0.00	4210			4210	0.166			29	31	0.472	28	23
←	2	A,B	3.5	1	2				4210		287		287	0.00	4210			4210	0.068			12	31	0.194	11	20
↰	4	C,D	3.5	2	1	20			2105			473	473	1.00	1958			1958	0.242			42	45	0.472	28	15
↲	3	C,D	3.5	2	1	15			2105	174			174	1.00	1914			1914	0.091			16	45	0.178	10	12
↳	5	B,C	3.5	3	1	15			2105			449	449	1.00	1914			1914	0.235	0.235		41	53	0.390	22	10
→	6	B,C	3.5	3	2				4210		425		425	0.00	4210			4210	0.101			17	53	0.168	10	8
↱	8	D,A	3.5	4	1	20			2105		443		443	0.00	2105			2105	0.210	0.210		36	32	0.579	34	24
←	7	A,B,C	3.5	5	2				4210		287		287	0.00	4210			4210	0.068			12	59	0.102	6	5

X:\Project\31041 Columbarium development at Tong To Ping Tsuen\Data\Calculation\[31041 - Junction_REF.xlsx]J4

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

AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	JK	26/7/2024
			Checked By:	SY	26/7/2024
J1 - Sha Tau Kok Road - Shek Chung Au / Access Road to Tong To Shan Tsuen	2026 Design Traffic Flow	Project No.: 31041	Reviewed By:	AW	26/7/2024



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	=	7.0	(metres)
W cr	=	0	(metres)
q a-b	=	6	(pcu/hr)
q a-c	=	329	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.1	(metres)
Vr c-b	=	25	(metres)
q c-a	=	251	(pcu/hr)
q c-b	=	6	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.0	(metres)
W b-c	=	3.0	(metres)
Vl b-a	=	25	(metres)
Vr b-a	=	25	(metres)
Vr b-c	=	25	(metres)
q b-a	=	14	(pcu/hr)
q b-c	=	12	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.794
E	=	0.859
F	=	0.751
Y	=	0.759
F for (Qb-ac)	=	0.462

THE CAPACITY OF MOVEMENT :

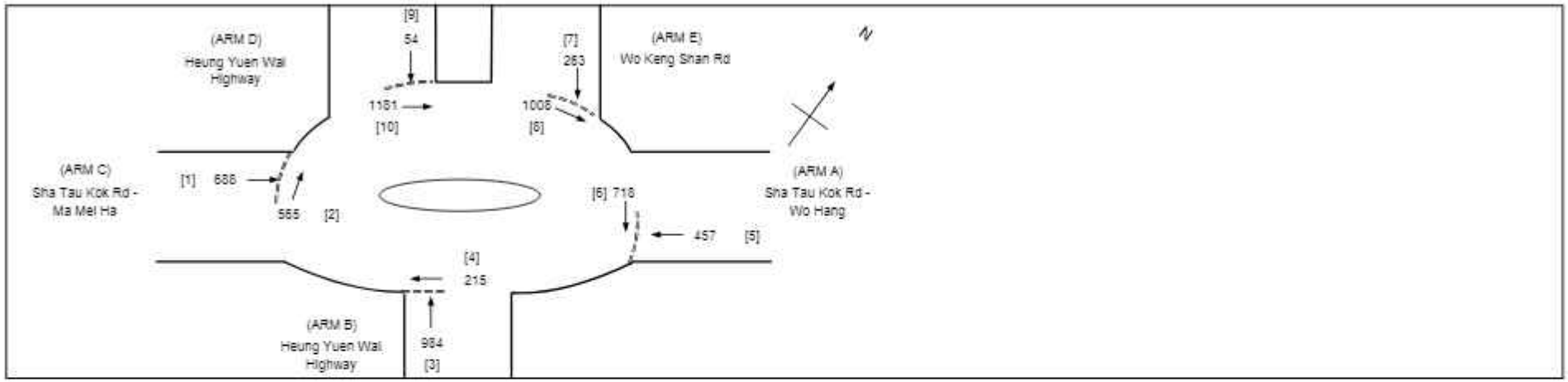
Q b-a	=	389	(pcu/hr)
Q b-c	=	561	(pcu/hr)
Q c-b	=	509	(pcu/hr)
Q b-ac	=	453	(pcu/hr)
Q c-a	=	1779	(pcu/hr)
TOTAL FLOW	=	620	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0350
DFC b-c	=	0.0214
DFC c-b	=	0.0118
DFC b-ac (Share Lane)	=	0.0574
DFC c-a	=	0.1411

CRITICAL DFC = 0.14

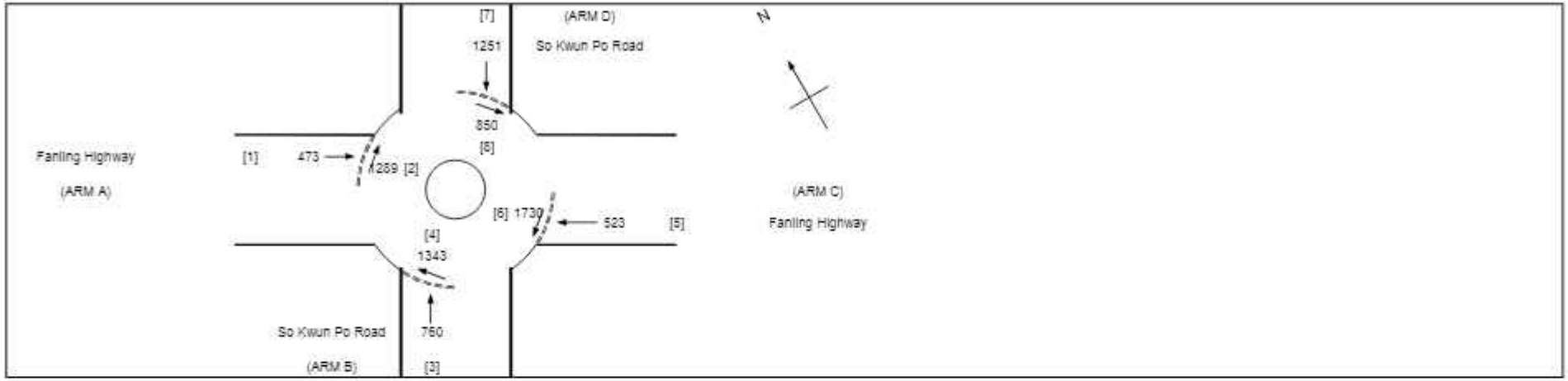
AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.A and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	GY	七月-2024
			Checked By:	JK	七月-2024
J2 - Heung Yuen Wai Highway / Sha Tau Kok Road – Wo Hang / Sha Tau Kok Road – Ma Me	2028 Design Traffic Flow	Project No.: 31041	Reviewed By:	SF	七月-2024



GEOMETRIC DETAILS:			ARM	A	B	C	D	E
V	=	Approach half width (m)		4.0	4.0	3.7	4.0	3.7
E	=	Entry width (m)		9.5	10.0	9.5	10.0	9.5
L	=	Effective length of flare (m)		29.0	32.0	19.0	50.0	18.0
R	=	Entry radius (m)		30.0	60.0	40.0	40.0	60.0
D	=	Inscribed circle diameter (m)		100.0	100.0	100.0	100.0	100.0
A	=	Entry angle (degree)		40.0	40.0	40.0	40.0	30.0
Q	=	Entry flow (pcu/h)		457	984	686	54	263
Qc	=	Circulating flow across entry (pcu/h)		718	215	565	1181	1008
OUTPUT PARAMETERS:								
S	=	Sharpness of flare = 1.6(E-V)/L		0.30	0.30	0.49	0.19	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		0.98	1.00	0.99	0.99	1.03
X2	=	V + ((E-V)/(1+2S))		7.42	7.75	6.83	8.34	6.56
M	=	EXP((D-60)/10)		54.60	54.60	54.60	54.60	54.60
F	=	303*X2		2249	2348	2010	2526	1986
Td	=	1+(0.5/(1+M))		1.01	1.01	1.01	1.01	1.01
Fc	=	0.21*Td(1+0.2*X2)		0.53	0.54	0.49	0.57	0.49
Qe	=	K(F-Fc*Qc)		1837	2227	1714	1839	1541
DFC	=	Design flow/Capacity = Q/Qe		0.25	0.44	0.40	0.03	0.17

TOTAL FLOW	=	4862	(pcu/hr)
CRITICAL DFC	=	0.44	

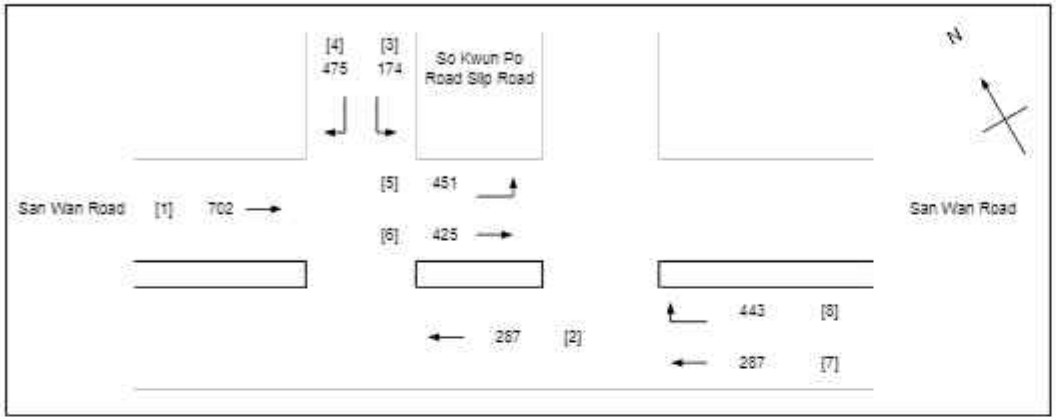
AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.A and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	JK	2024年7月26日
			Checked By:	SF	2024年7月26日
J3 - Fanling Highway / So Kwun Po Road	2028 Design Traffic Flow	Project No.: 31041	Reviewed By:	SF	2024年7月26日



GEOMETRIC DETAILS:			ARM	A	B	C	D
V	=	Approach half width (m)		3.5	4.4	4.5	8.1
E	=	Entry width (m)		7.4	5.4	6.7	11.0
L	=	Effective length of flare (m)		20.7	7.6	53.5	7.4
R	=	Entry radius (m)		81.0	36.0	100.0	20.0
D	=	Inscribed circle diameter (m)		100.0	88.0	100.0	60.0
A	=	Entry angle (degree)		23.0	21.0	12.0	30.0
Q	=	Entry flow (pcu/h)		473	760	523	1251
Qc	=	Circulating flow across entry (pcu/h)		1289	1343	1730	850
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L		0.30	0.21	0.07	0.63
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.06	1.05	1.10	1.00
X2	=	V + ((E-V)/(1+2S))		5.93	5.10	6.44	9.39
M	=	EXP((D-60)/10)		54.60	16.44	54.60	1.00
F	=	303*X2		1798	1546	1953	2844
Td	=	1+(0.5/(1+M))		1.01	1.03	1.01	1.25
Fc	=	0.21*Td(1+0.2*X2)		0.46	0.44	0.48	0.76
Qe	=	K(F-Fc*Qc)		1274	1011	1227	2202
Qe grade	=	K(1.11F-1.4Fc*Qc)		1230	943	1094	2258
DFC	=	Design flow/Capacity = Q/Qe		0.38	0.81	0.48	0.55

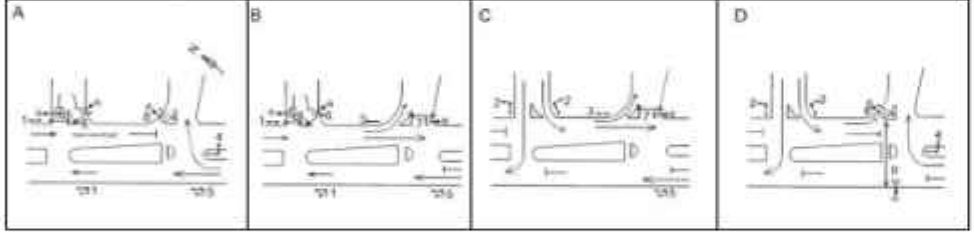
TOTAL FLOW	=	8219 (pcu/hr)
CRITICAL DFC	=	0.81

AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Application for Amendment of Plan for Proposed Rezoning from "Village Type Development" Zone to "Other Specified Uses" zone annotated "Columbarium" Zone at Lots 1422 S.B and 1423 S.B (Part) in D.D. 41, Tong To, Sha Tau Kok, New Territories			Prepared By:	JK	26/7/2024
			Checked By:	SY	26/7/2024
J4 - San Wan Road / So Kwun Po Road Slip Road	2028 Design Traffic Flow	Project No.: 31041	Reviewed By:	AW	26/7/2024



No. of critical vehicluar phase per cycle:		N =	2	
Intergreen Period	Stage A - B	I =	6	sec
	Stage B - C	I =	0	sec
	Stage C - D	I =	5	sec
	Stage D - A	I =	0	sec
Cycle time		C =	88	sec
Sum(y)		Y =	0.446	
Loss time		L =	11	sec
Total Flow		=	3244	pcu
Co	= (1.5*L+5)/(1-Y)	=	38.6	sec
Cm	= L/(1-Y)	=	19.9	sec
Yult	= 0.9-0.0075L	=	0.816	
R.C.ult	= (Yult-Y)/Y*100%	=	83.2	%
Cp	= 0.9*L/(0.9-Y)	=	21.6	sec
Ymax	= 1-L/C	=	0.875	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	76.5	%

Existing Method of Control



Pedestrian Phase	Width (m)	Stage no.	Green Time Required (s) SG	FG	Green Time Provided (s) SG	FG	Check
6		A,B	7	5	28	5	OK
7		B,C	7	6	40	6	OK
8		D,A	7	5	29	5	OK
9		D	6	7	16	7	OK

	Movement	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Left Flow pcu/h	Straight Flow pcu/h	Right Flow pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m	Flare lane Effect	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 (sec)
↑	1	A,B	3.5	1	2				4210		702		702	0.00	4210			4210	0.167			29	31	0.473	28	23
←	2	A,B	3.5	1	2				4210		287		287	0.00	4210			4210	0.068			12	31	0.194	11	20
↱	4	C,D	3.5	2	1	20			2105			475	475	1.00	1958			1958	0.243			42	45	0.474	28	15
↰	3	C,D	3.5	2	1	15			2105	174			174	1.00	1914			1914	0.091			16	45	0.178	10	12
↳	5	B,C	3.5	3	1	15			2105			451	451	1.00	1914			1914	0.236	0.236		41	53	0.391	22	10
→	6	B,C	3.5	3	2				4210		425		425	0.00	4210			4210	0.101			17	53	0.168	10	8
↰	8	D,A	3.5	4	1	20			2105		443		443	0.00	2105			2105	0.210	0.210		36	32	0.579	34	24
←	7	A,B,C	3.5	5	2				4210		287		287	0.00	4210			4210	0.068			12	59	0.102	6	5

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

Y/NE-STK/5

自由福居

管理方案

2024 年 8 月(修改用作回應: TIA 報告/城規會/運輸署)

目錄

1. 基本資料 3

2. 可容納的訪客量及入場管制 3-6

3. 人流管理 6-7

4. 保安管理 8

5. 營辦者管理模式 8

6. 日常運作人手調配 9-10

7. 應對火警或其他緊急情況的應變方案 10

8. 確保遵從發牌委員會訂明的發牌條件或發出的指引及實務守則的措施 11

9. 投訴處理 11-12

10. 確保骨灰安置所持續營運的財務方案 12

11. 管理方案執行人及批准人 12

自由福居-截算前骨灰安置所(管理方案)

(1)基本資料

骨灰安置所名稱	自由福居
地址	新界沙頭角塘肚坪村 24 號 (丈量約份第 41 約地段第 1423 號 B 分段(部分))
規劃申請	地段: (丈量約份第 41 約地段第 1423 號 B 分段(部分)及第 1422 號 B 分段(部分))
開始營辦年份	1988 年
營辦者名稱	張健龍
營辦者的身分	處所現租客 /地段第1423號B分段(部分) / 租賃為期28年 由(07/03/2019 至 30/06/2047)
所屬宗教	道教/佛教
佔地面積	約 160 平方米
總樓宇建築面積	約 60 平方米
建築物	1 座單層骨灰安置所大樓
配套設施	沒有 **(備註: 任何非牌照申請範圍及非骨灰安置所範圍是業權人/村民無條件給予自由福居使用)**

(2) 可容納的訪客量及入場管制

•可容納的訪客量上限，是根據屋宇署的要求，消防安全(建築物)條例《2011年消防安全守則》而訂定

• 自由福居同一時間可容納的訪客量為 22 人上限。

灰位數目	單人灰位共 864 個
已使用灰位	單人灰位共 60 個 **(歷史悠久)**
可供出租/售	單人灰位共 804 個

各時間的開放時間如下:

時期	**開放時間**
平日星期一至五	早上9:00至下午4:00
平日星期六、日及一般假期	早上9:00至下午4:00
掃墓高峰日子 *	早上8:00至下午6:00

*** 平日每組訪客訪客並於下午3時30分作最後入場**

*** 掃墓高峰日子每組訪客訪客並於下午5時30分作最後入場: 清明節及重陽節正日及其之前後兩週的星期六、星期日**

*** 註意: 任何時期只接受「預約拜祭到訪安排」未經預約訪客一律不得進入或前往拜祭**

預約服務

•「自由福居」一直實施『**訪客預約到訪制度**』，訪客可透過以下方式登記進行預約; **(預約電話號碼及WhatsApp號碼: 5346 4499)** 每組訪客必須預約並提供包括但不限於靈灰位編號，有關聯絡人的 * 姓名, *電話, *訪客人數, *前往方法, 待「自由福居」安排，預約以「自由福居」確認記錄為準。

• 預約須知:

1. 自由福居每日不提供任何停泊和停留車輛及上落客設施給予拜祭訪客**(謝絕訪客車輛駛包括的士)。**
2. 平日-每組訪客可乘坐公共交通前往本場所於**"塘肚站"**下車後再步行550米前往。
3. 高峰期自由福居會根據已預約每組訪客及人數，在高峰期特別交通安排，會提供免費接駁巴士服務，並於指定上落客地點接送每組訪客,「需要時會增加免費接駁巴士服務及增添人手安排疏導訪客」。
4. 每組訪客可選擇每日各時段**(參考下列時間表)**，每個時段可提供5組訪客或20人上限預約。以確保在每個時段的過渡期不會超過**場內可容納的訪客量共22人上限。*訪客上限是根據屋宇署的要求，消防安全(建築物)條例《2011年消防安全守則》而訂定。***
5. 每組訪客拜祭停留時間: 平日:30分鐘/高峰期:30分鐘（需按「自由福居」回覆予訪客預約確認內容為準)。
6. 逾時到達及未有預約的訪客，**自由福居工作人員將會拒絕其進入或前往拜祭。**
7. 掃墓高峰期日子訪客可於**(2星期前)**於辦公時間內以**WhatsApp或電話**進行預約,「自由福居」將會透過社交媒體**Facebook專頁**給訪客獲得最新預約及拜祭的資訊，最後「自由福居」會按回覆予訪客預約確認內容為準。
8. 注意事項: 《自由福居骨灰安放權協議》第20點就有關場內規則，入場管制的安排列明，**買方必須同意自由福居日後任何拜祭期間有權對任何訪客作出入場管制和交通及公共運輸管理**、包括人流及車流管制、香火管制等安排，本場所全場嚴禁化寶及燃點蠟燭冥鎹，禁止室內燒香及擺放體積過大的祭品，並鼓勵訪客以供水及鮮花方式代替燒香拜祭，**買方必需遵守場內一切規則，不遵守者將被解除龕位合約。**

平日:（星期一至五、六及日及一般公眾假期），平日每組訪客並於下午 3 時 30 分作最後入場，只要當天仍有時段可提供拜祭，每個靈灰位在同一天可以預約多於一次，以便不同成員前來拜祭。拜祭人士只可逗留自由福居大樓 30 分鐘。

可選擇的 14 個時段如下:

每小時的訪客人數上限為40人（每小時2節，每節30分鐘供20人/5個家庭拜祭)

	平日時段 **(拜祭限時 30 分鐘)**		平日時段 **(拜祭限時30分鐘)**
1	9:00	8	12:30
2	9:30	9	13:00
3	10:00	10	13:30
4	10:30	11	14:00
5	11:00	12	14:30
6	11:30	13	15:00
7	12:00	14	15:30

註:「自由福居」也會根據已預約訪客人數及需要, (如需要)會特別安排車輛，在指定地點提供免費接送服務。

掃墓高峰日子:

1. **自由福居可容納的訪客量上限是根據屋宇署要求的，消防安全(建築物)條例《2011年消防安全守則》而訂定以及2018年骨灰所辦清明節交通人流數據而訂定和2024年相關的交通影響評估。**
2. 在掃墓高峰日子期間自由福居會根據預約人數提供**「免費接駁巴士服務」**接載訪客來往**上水站(新運路)**和**自由福居**詳情如下。

備註: 自由福居營運至今，骨灰安置所在當地從來沒有因拜祭的訪客人流及其車流和違泊問題而造成對周邊地區帶來任何滋擾問題以及不協調的負面影響評論。

免費接駁巴士服務安排如下:

車輛數目 : 1輛-2輛 (會根據預約人數決定實際車輛需要)
載客量 : 27 座位
由上水站(新運路) → 自由福居 (中間不停站)
由自由福居 → 上水站(新運路) (中間不停站)
行車時間 : 大約25分鐘
由上水站(新運路)開出 : 07:30 – 17:30 (每30分鐘一班)
由自由福居開出 : 08:25 – 18:00 (每30分鐘一班)

高峰期預約拜祭安排: (清明節及重陽節正日及其之前後兩週的星期六，日) 早上8:00 至 下午6:00

為公平原則，每個靈灰位每天只可供訪客預約一次,令其他訪客也能有機會前來拜祭。
拜祭人士只可逗留自由福居大樓30分鐘。訪客並於下午5時30分作最後入場,可選擇的**20個**拜祭時段如下:

免費接駁巴士服務: 每小時的訪客人數上限為40人 (每小時2節/每節30分鐘供20人/5個家庭拜祭)

	掃墓高峰日子時段 (拜祭限時 30 分鐘)		掃墓高峰日子時段 (拜祭限時30分鐘)
1	8:00	11	13:00
2	8:30	12	13:30
3	9:00	13	14:00
4	9:30	14	14:30
5	10:00	15	15:00
6	10:30	16	15:30
7	11:00	17	16:00
8	11:30	18	16:30
9	12:00	19	17:00
10	12:30	20	15:30

註: 自由福居一直採取『**訪客預約到訪制度**』控制場內進場人數上限，在掃墓高峰日子自由福居也會根據已預約訪客人數及需要時在指定**上落客區**增加提供**免費接駁巴士**接送服務及增添人手安排。

交通及公共運輸安排:

「自由福居」任何時段也**不提供任何停泊和停留車輛及上落客設施**給予拜祭訪客**(亦嚴禁訪客車輛包括的士闖進自由福居相關路段和範圍)**，**平日訪客可乘坐公共交通前往本場所**於〝塘肚站〞下車後再步行前往，故拜祭訪客請乘坐以下公共交通工具前往。

公共交通前往方法:

交通公具	號碼	路線	開放時間內班次
專線小巴	55K	上水港鐵站開往沙頭角,請於**塘肚山村**下車,沿村路步行約 550 米約 10 分鐘抵達自由福居。	每 4-8 分鐘
巴士	78K	粉嶺港鐵站開往沙頭角,請於**塘肚站**下車,沿村路步行約 550 米約 10 分鐘抵達自由福居。	每 20 分鐘

(3) 人流管理:

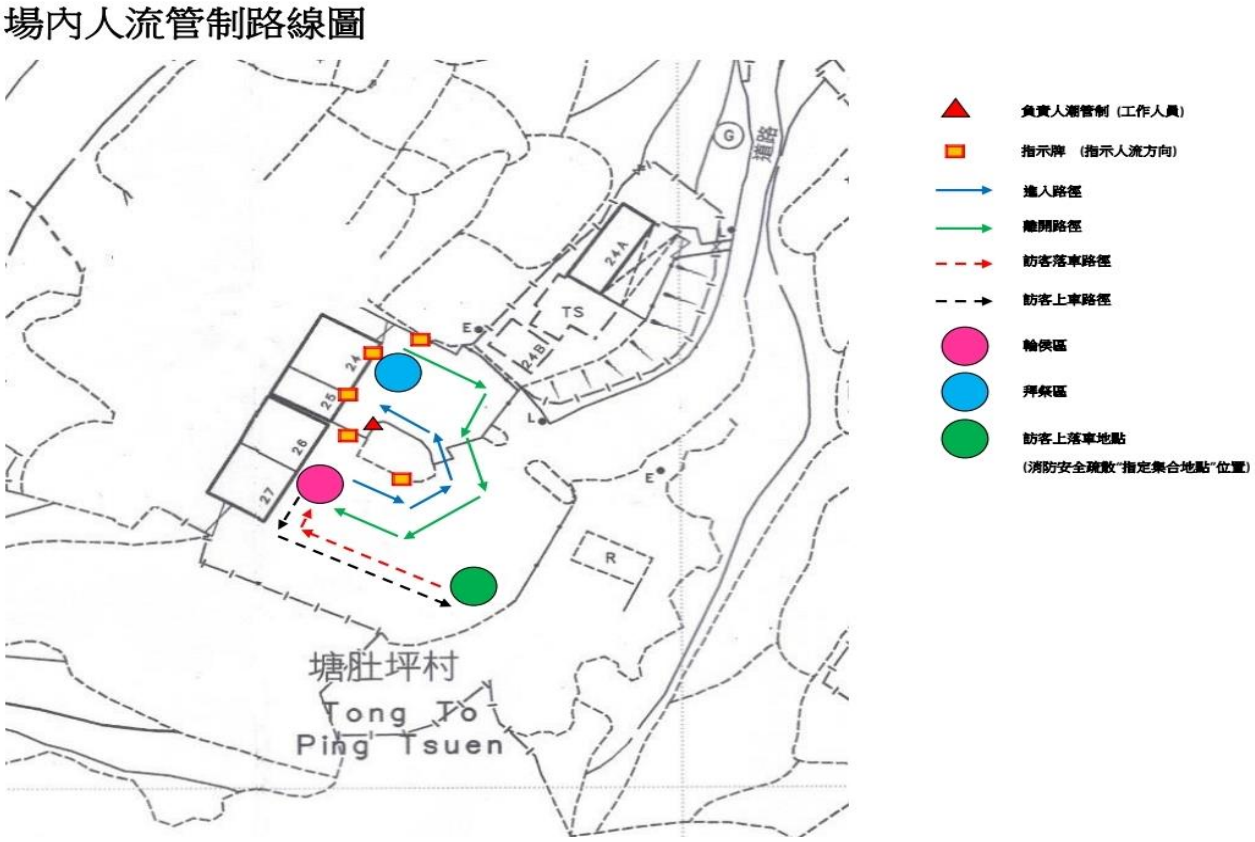
掃墓高峰期場外措施:

1. 掃墓高峰日子（即清明節及重陽節正日及其之前兩週和其後兩週的星期六及星期日）自由福居將會安排**27座穿梭巴士**在**(上水站)**上落客區安排工作人員為已預約前來人士進行登記,屆時工作人員會核對每組訪客的資料並登記及發放**(訪客證件)**。
2. 已完成登記的每組訪客，會獲發**(顏色和编號的訪客證)每組訪客必須戴上方便工作人員用作識辨，工作人員**在訪客離開下車時收回**(訪客證件)**。

掃墓高峰期場內措施:

1. 訪客到達**(自由福居)**下車後，工作人員會根據相關**(顏色和编號的訪客證)用作識辨訪客**監控進入人數和協調訪客到拜祭區進行拜祭。
2. 自由福居場內每位工作人員將會佩帶對講機，方便協調和溝通，並確保訪客**進入室內人數維持22人上限**，亦會提示訪客遵守時間離開，並帶走拜祭物品和垃圾以及疏導訪客上落車安排等。
3. 自由福居亦會安排營運時間人流高峰期間於**大樓內及穿梭巴士上**作出廣播措施;
   「各位拜祭人士，為了安全及環保起見，本場所一律不可燃燒冥鏹，請於自由福居指定的香爐上香，拜祭人士需確保守時離開，大家請遵守秩序，保持場地清潔並帶走拜祭物品和垃圾，完成拜祭人士請聽從工作人員指示，乘搭穿梭巴士離開，並於下車後交還訪客證件，剛到達拜祭人士下車後，請聽從工作人員指示作拜祭安排，多謝合作！」
4. 自由福居於户外已設置拜祭區**日常提供6張獨立拜祭桌**方便有效地執行預約各時段上限為5組家庭或20人上限措施。
5. 在拜祭時段全部結束後，將當天的訪客資料整理好，在登記冊內補充訪客原有的預約記錄及離開記錄，並記錄訪客違規事項及情況**(如有，會作出跟進及檢討)**。
6. 登記冊的資料將會保留最少三年,，以便在骨灰所辦人員要求時提供該些紀錄以作查閱。
7. 自由福居日常具備**急救箱設備**，在掃墓高峰日子(如有需要時)，將會安排有急救認可資格人員駐場當值。

場內人流管理路線圖



香火管制

1. 自由福居範圍全場嚴禁化寶及燃點蠟燭冥鎹，禁止室內燒香及擺放體積過大的祭品，
   (自由福居室內是無烟區)拜祭訪客嚴禁室內燒香。
2. 鼓勵訪客:【以供水及鮮花方式代替燒香拜祭】
3. 平日户外只准採用環保微烟香【限制拜祭人士燒香每人 3 支】。
4. 高峰期户外只准採用環保微烟香【限制拜祭人士燒香每人 1 支】需要時加設臨時燒香區域
   及臨時措施。

(4) 保安管理

1. 自由福居已裝設24小時CCTV保安系統，確保入口處及自由福居範圍的情況有足夠監察，以隨時回應。
2. 自由福居保安工作外判由專業保安公司管理，提供駐場保安看管巡邏。
3. 於掃墓高峰期間按照預約登記冊數據，因應已預約拜祭人數，會議決定是否須要增聘兼職保安員人數，穿梭巴士數目，以確保訪客及公眾安全，和禁止唔闊拜祭車輛駛入本村道路。
4. 此外，設有前線經理和執勤主任當值，以備處理突發事件及指揮現場工作。
5. 增聘兼職人手**(掃墓高峰期日子)**聘請兼職人員，職位包括：保安員，工作人員，雜工等。如下:

兼職職位	職責安排
保安員	維持**塘肚村內所有道路**交通暢通及禁止拜祭車輛唔闊違泊駛入本村及本場所任何路段和範圍的安排,確保訪客及公眾安全。
工作人員	提示訪客大家請遵守秩序，保持場地清潔並帶走拜祭物品和垃圾，以及疏導人群上車下車，登記及維持秩序安排，駐守主要入口，確保人流暢順，解決拜祭人士查詢。
雜工	維持拜祭各時段**大樓室內確保 20 人上限**及香爐，協助拜祭區秩序和保持場地範圍清潔。

負責交通及人流管制人員:

1. 保安員負責交通人流管制，當值主任負責與保安員聯繫，保安員由外判公司承包保安服務，培訓工作由外判公司負責。
2. 當值主任負責執行及指揮人流及車流管制，於每年拜祭高峰期，由經理安排工作簡介會，節日完結後進行全體工作檢討會議。
3. 當值主任執勤；當值主任職責，主要是執行已制定日常營運方案，協調及調配人手日常執行。
4. 前線經理和當值主任執勤 - 自由福居高峰期日子安排前線經理和當值主任執勤，每名職員會佩帶一部對講機以便有效監察場內秩序及，以備有足夠人手處理衝突事件及指揮現場工作。
5. 急救服務：自由福居內安排設有急救箱,以備訪客使用，每月均會檢查急救箱物品數量,以備有足夠數量急救用品。
6. 在平常日子，會約有1 名工作人員在場內駐守執行日常場內事務**(包括預約拜祭安排)**。

(5) 營辦者管理模式

最高管理人員

姓名：張健龍

職位：總經理

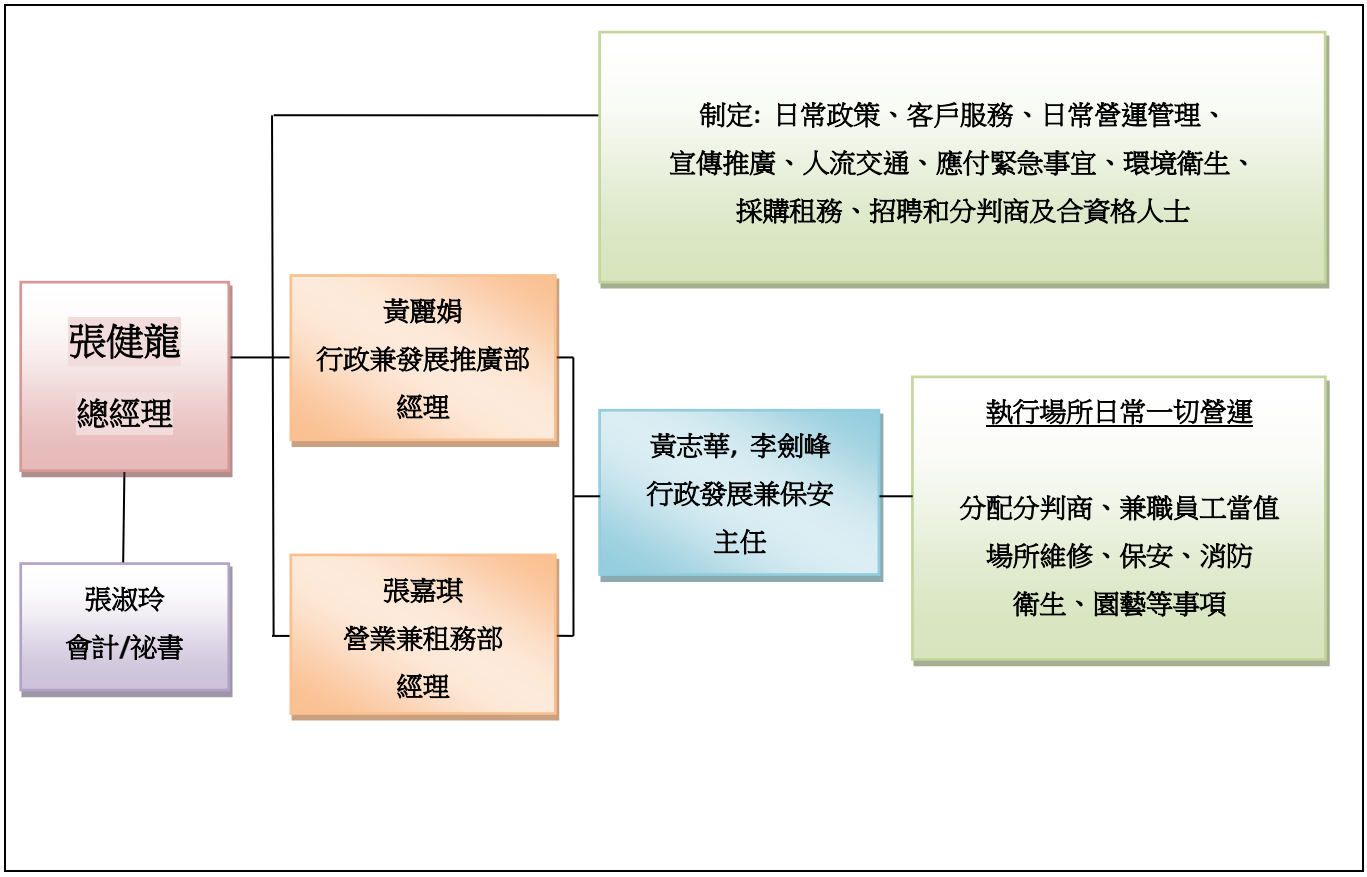
聯絡電話號碼：9024 2319

年資：10年以上經驗：負責「自由福居」日常管理經營，協調以及牌照申請,制定場所運作熟知任何細節

其他管理人員

年資：7年以上經驗：負責「自由福居」日常營運及牌照申請,各類相關專業人士聯絡，協調執行場所管理營運熟知各種安排

自由福居架構表:



(6) 日常運作人手調配:

日常人手編制自由福居私營骨灰安置所共__**6 名**__全職員工，日常有足夠人手應付營運需求。
以下職位直接與日常營運相關;

職位及人數	職責
總經理（1 人)	監管《私營骨灰安置所條例》的相關事宜及日常營運。
行政發展部經理（1 人)	制定《私營骨灰安置所條例》的相關事宜及日常營運及執行處理保安人流管理、消防安全和應付緊急事宜。客户查詢和投訴事宜，負責編制高峰期人手和聘請兼職人數及安排外判工作和應付指揮緊急事宜。
營業租務部經理（1 人)	執行骨灰安置所日常營運、保安人流管理、消防安全、樓宇維修保養。 協助執行骨灰安置所日常營運人手編制、高峰期聘請兼職人數，客户查詢、投訴事宜、消防安全、樓宇維修、防治蟲鼠滅蚊措施及場所行政工作和應付緊急事宜。
保安發展主任（2 人)	協助執行骨灰安置所保安工作及人流車流管理及場所相關工作事宜。 協助執行《私營骨灰安置所條例》的相關工作事宜及日常營運工作事宜。
會計秘書（1 人)	處理骨灰安置所日常營運賬目及文書事宜，協調定期會議。

掃墓高峰日子人手調配:

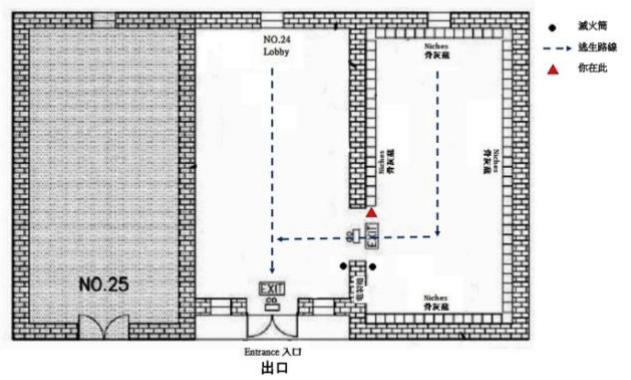
1. 設有前線經理和當值主任執勤協調人手，監察全場運作;
2. 在掃墓高峰日子，安排前線經理和當值主任執勤當值;
3. 在掃墓高峰日子(掃墓高峰期日子清明節、重陽節前後周末)，將按照預約登記册數據，因應已預約拜祭人數，增聘兼職人手增聘兼職人員職位包括:保安員，工作人員，雜工等；確保訪客及公眾安全，加強環境清潔衛生。

員工訓練

1. 每年 1 次火警演習，示範滅火筒使用，提高防火意識。
2. 自由福居安排在場所設有急救箱。
3. 使用環保香。

(7) 應對火警或其他緊急情況的應變方案:

1. 當發現【**火警**】發生時，請保持【**鎮定**】。
2. 在安全情況下，設法用滅火筒將火撲滅【**若火警來自電源切勿用水灌救**】,
3. 應改用氣體式【**二氧化碳滅火筒**】此外;【**並須關閉電力總制**】。
4. 保安部負責人: 【姓名:黃志森　職位: 主任　聯絡電話:9323 2482】
5. 可獲的支援和資源: 場所有道路給消防車輛直接到達，鄰近【**大約 160 米**】設有消防街喉。
6. 如附近有電話，請撥電話【999】通知消防局。
7. 如時間許可【**應通知場所辦事處**】。
8. 員工職責: 巡視場所範圍內禁止燃燒冥鏹活動。
9. 自由福居設走火〝逃生路線指示圖〞
10. 安全疏散〝指定集合地點指示圖〞
11. 定期檢查測試:【**滅火設備及逃生指示，包括滅火筒、緊急照明燈等等**】。
12. 自由福居時刻保持緊急車輛通道暢通。

9. 自由福居設走火〝逃生路線指示圖〞	**10. 安全疏散〝指定集合地點指示圖〞**
附件5 ＜自由福居＞逃生路線圖 圖 (1) 	附件6 ＜自由福居＞消防安全疏散“指定集合地點”位置 圖 (2) 

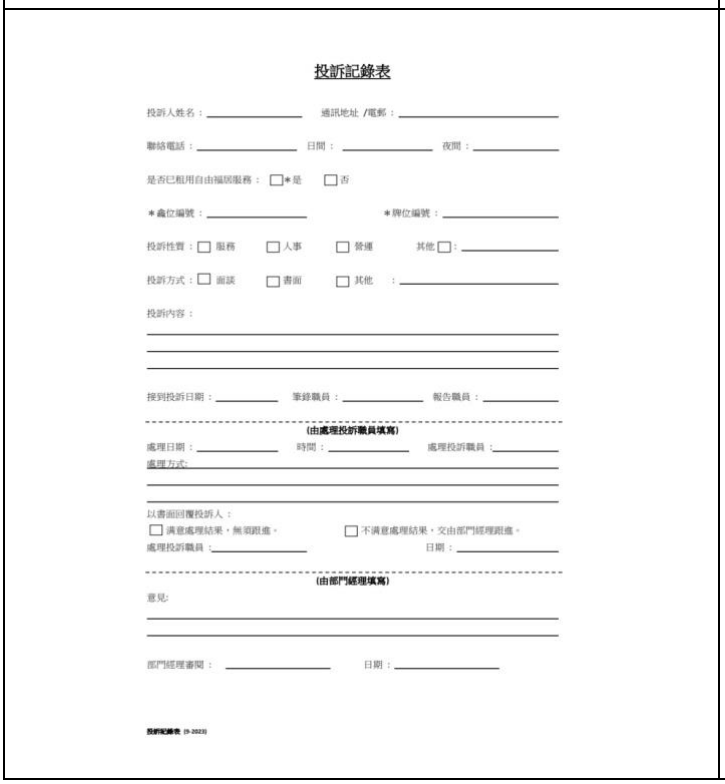
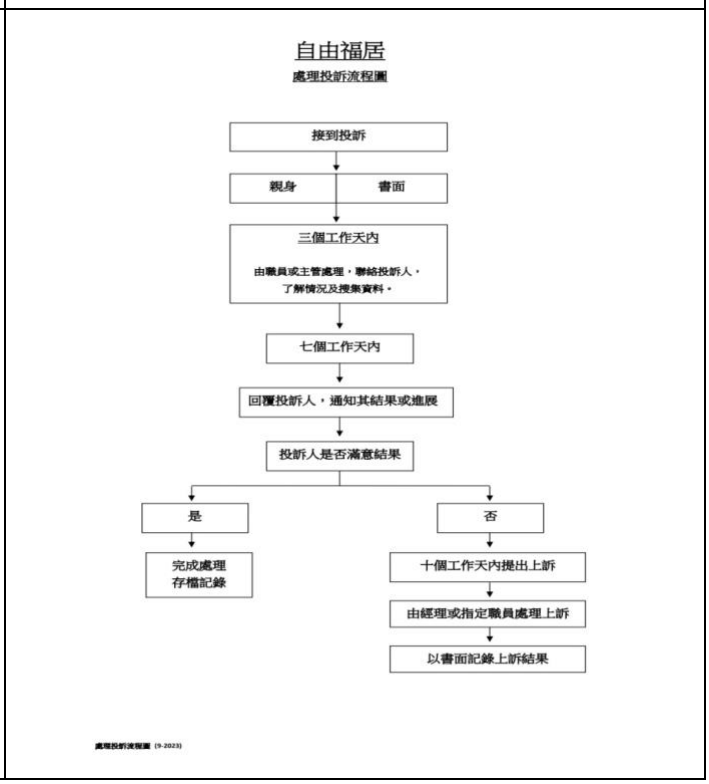
(8)確保遵從發牌委員會訂明的發牌條件或發出的指引及實務守則的措施

- 自由福居管理層定期會議及制定適當措施，確保骨灰安置所遵從發牌委員會訂明的發牌條件，並發出指引及實務守則，其中包括確保骨灰安置所的管理人員及前線人員熟知該等條件，指引及實務守則的措施，管理層為確保該等人員遵從該等條件，指引及實務守則而作出定期會議監察，記錄及報告規定。

(9) 投訴處理：

自由福居設有處理投訴的程序，以確保公眾人士或職員知悉他們有投訴的權利，並讓他們知悉投訴的程序和本場所如何處理投訴。處理如下:

1. 投訴人可透過親身或書面形式向本場所提出投訴。
2. 如接獲投訴，由當值辦公室職員 / 部門主管處理，並在三個工作天內聯絡申訴人了解及搜集資料。負責職員須填寫《投訴記錄表》。**(請參閱下列附件)**
3. 在七個工作天回應申訴人，通知其結果或進展。
4. 如投訴人不滿結果，在十個工作天內，可向經理式指定職員提出投訴。
5. 上訴最高可至董事總經理作出之裁決為最終裁決。
6. 若遇需要較長時間處理的複雜個案，負責職員須通知投訴人個案的進展及交代回覆結果的日期。
7. 如投訴人透過親身形式向本場所提出投訴，負責職員可以口頭回覆，即使已獲即時解決，仍需將事件記錄在案。如透過書面提出投訴，則需按上述程序以書面回覆，並將事件記錄在案。
8. 若事件有可能涉及刑事成份，本場所會將事件交由執法部門或轉介至相關機構處理。
9. 有關處理投訴的流程，參閱《處理投訴流程圖》**(請參閱下列附件)**

《投訴記錄表》	《處理投訴流程圖》
	

在以下情況下，一般不受理的投訴:

1. 投訴人有責任舉證，如投訴的理據薄弱，含糊不清或缺乏足夠資料，本場所可要求投訴人提供具體詳情。
2. 自由福居不會就匿名投訴展開調查，但依然會檢視有關投訴內容。
3. 如投訴人不是當時人，本場所可要求投訴人請當時人直接到本場所提出投訴。
4. 如投訴事件已發生超過 1 年，客觀因素/環境證據可能消失及改變，引致蒐證困難。

(10) 確保骨灰安置所持續營運的財務方案

- 自由福居已制備完善及配合長遠發展方向的財務政策，以確保自由福居的長期運作及日常營運開支及大樓維修保養的安排，以提供舒適及安全的環境供訪客使用。

- **有關財務方案（請參閱附件 3)**

(11) 管理方案執行人及批准人：

負責執行管理方案的人員的資料:

姓名: 黃麗娟

職位: 經理

聯絡電話號碼:

負責批准管理方案及代表上述骨灰安置所提交本管理方案的人員資料：

姓名: 張健龍

職位: 總經理

聯絡電話: 9024 2319

電郵地址: cu.8211@yahoo.com.hk

簽署：_____

日期：_____