# **Appendix IV**

Traffic Impact Assessment

## **Document Status Control Record**

Proposed Columbarium at G/F, Two Existing Buildings, at Lung Ngam Monastery, No. 47, Wang Hang Village,

Tai O, New Territories

[Lot No. 47 (Part) in DD 313]

**Traffic Impact Assessment Report** 

Originating Organisation :	Prepared by: GWL	6.8	Date: 29 July 2024
LLA Consultancy Limited Unit 610, 6/F, Island Place Tower,	Approved by: SLN		Date: 29 July 2024
510 King's Road, North Point, Hong Kong	Revision No.:		Date of Issue: 29 July 2024

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#### 1 INTRODUCTION

## 1.1 Background

- 1.1.1 The application premises lies at the ground of two existing 2-storey buildings (Building 1 and Building 2) within a religious institution, namely Lung Ngam Monastery (the Monastery), at the eastern fringe of Tai O area. The Monastery falls on private land lot No. 47 in DD 313 located at No. 47 Wang Hang Village, Tai O, New Territories.
- 1.1.2 Building 1 and Building 2 are situated at the immediate southwest of the main building of the Monastery. Building 1 was confirmed by the Planning Department as "Existing Use" and currently accommodating 901 nos. of occupied niches at its ground floor (G/F) and the first floor (1/F). Building 2 is currently vacant. The applicant proposes to relocate/rearrange the existing occupied niches from the 1/F of Building 1 to G/F of Building 1 and G/F of Building 2. The total number of niches remain unchanged (i.e. 901 nos. of niches).
- 1.1.3 The application premises falls within the "Government, Institution or Community" ("G/IC") zone on the Approved Tai O Fringe Outline Zoning Plan (OZP) No. S/I-TOF/2. In order to comply with the town planning requirements, a planning application under Section 16 of Town Planning Ordinance is required for the existing columbarium use at the Site to meet the planning aspect requirements.
- 1.1.4 LLA Consultancy Limited has been commissioned to conduct a traffic impact assessment (TIA) study in support of the S16 application. This TIA report presents the study findings.

# 1.2 Objectives

- 1.2.1 The objectives of this study can be summarised as follows:
  - to discuss the development content of the proposed (existing) columbarium;
  - to review the latest existing traffic conditions during the festival periods (i.e. the Ching Ming Festival Days) in the vicinity of the proposed (existing) columbarium;
  - to appraise the potential traffic impact on Festival Day with the proposed relocation/rearrangement of niches.

#### 2 THE PROPOSED (EXISTING) DEVELOPMENT

## 2.1 Development Site and Development Schedule

2.1.1 As shown in **Figure 2.1**, the application premises is located No. 47, Wang Hang Village, Tai O, New Territories. At present, no vehicular access is provided for the application premises. The proposed (existing) columbarium comprises of a total of occupied 901 niches.

# 2.2 Car Parking and Loading/Unloading Arrangements

- 2.2.1 There is no vehicular access connecting the Monastery. The same arrangement will be maintained in the proposed (existing) columbarium development.
- 2.2.2 As the existing buildings are not equipped with a vehicular access, no car parking and loading/unloading facilities are being provided. Meanwhile, there is no standard requirement for car parking and loading/unloading provisions with respect to the columbarium development under the current Hong Kong Planning Standards and Guidelines (HKPSG).
- 2.2.3 At present, all visitors are well aware of nil parking provision within the Monastery and they used to travel to/from the Monastery by public transport or on foot. It is anticipated the same travelling pattern will be maintained upon obtaining the planning approval and the license.
- 2.2.4 According to the applicant, all necessity deliveries are conducted by hands from the nearby local stores once per month together with the necessity deliveries for the Monastery. The applicant has confirmed that the frequency of necessity deliveries will not be increased after obtaining the planning approval and the license since there is no increase in the number of niches. In view the deliveries will be still conducted by hands, no loading/unloading provision is required within the Site.

#### 3 EXISTING TRAFFIC CONDITIONS

## 3.1 Existing Road Network

- 3.1.1 The only major road in the vicinity of the Site is Tai O Road, which is a single 2-lane rural road. The section of Tai O Road/Keung Shan Road connecting between Tai O Bus Terminus and Sham Wat Road carried an Annual Average Daily Traffic (AADT) of 1,470 vehicles only in 2022.
- 3.1.2 It should be noted that for a vehicle to travel to Tai O or to travel at south Lantau Island, the vehicle has to apply a permit from the Transport Department.

# 3.2 Existing Pedestrian Generation

3.2.1 In order to understand the visiting pattern of the proposed (existing) columbarium, pedestrian count surveys were conducted at the Site on 4 April 2024 (Thursday, the Ching Ming Festival Day). **Table 3.1** shows the survey result on the visiting pattern of the existing columbarium. The peak hour of the observed pedestrian flows was occurred at 12:00 to 13:00.

Table 3.1 Recorded Existing No. of Visitors

From Time	Attraction	Generation	Total				
Recorded no. of Visitors (person/hour)							
0900-1000	140	50	190				
1000-1100	302	215	517				
1100-1200	357	329	686				
1200-1300	336	412	748				
1300-1400	153	300	453				
1400-1500	173	125	298				
1500-1600	26	53	79				
Total	1,487	1,484	2,971				

3.2.2 The survey result indicated that there were a total of 1,487 visitors on the Ching Ming Day. The arriving peak hour occurred at 11:00 am and the visitor number is 357.

## 3.3 Modal Split of Visitors of the Existing Columbarium Development

3.3.1 To obtain the existing modal split, a questionnaire survey regarding the mode of transport adopted by the visitors was also conducted on 4 April 2024, the Ching Ming Festival Day, on the existing travel characteristics of the grave sweepers of the proposed (existing) columbarium. The results are summarized in **Table 3.2**.

Table 3.2 Surveyed Mode of Transport of the Existing Columbarium Visitors (Daily)

Mode of Transportation	No. of Surveyed Visitors	Percentage of Total (%)	
Walk	399	33%	
Private Car	107 9%		
Taxi	16	1%	
Bus	592	49%	
Ferry	70	6%	
Private Boat	30	2%	
Total	1,214	100%	

3.3.2 The questionnaire survey results showed among the surveyed number of 1,214 visitors, most of the visitors were by bus and on foot.

# 3.4 Existing Public Transport Facilities

#### Land Public Transport

3.4.1 Few bus routes are operating at Tai O, connecting Tai O to Tung Chung, Mui Wo, and Ngong Ping. **Table 3.3** shows the existing franchised bus routes serving the Tai O area.

Table 3.3 Existing Bus Routes

Route No.	Origin-Destination	Frequency (min)
1	Mui Wo Ferry Pier – Tai O	20 – 60
11	Tung Chung Station Bus Terminus – Tai O	10 – 45
21	Ngong Ping – Tai O	25 – 60

#### Marine Public Transport

3.4.2 Beside the land public transport, the grave sweepers can use ferry to arrive the proposed (existing) columbarium. Special ferry services were provided on the Ching Ming Festival Day.

Table 3.4 show the location of the existing ferry pier serving the Tai O area on Ching Ming Festival Day.

Table 3.4 Existing Ferry Routes

Origin-Destination	Frequency (min)
Tuen Mun – Tai O	10 – 120
Tung Chung – Tai O	25 – 125

#### 4 FUTURE FESTIVAL SCENARIO

#### 4.1 Future Traffic Conditions

4.1.1 The proposed columbarium development is anticipated to operate continuously similar to the existing columbarium. Since no additional niches will be added to the application premise, the traffic conditions for visiting the proposed columbarium will remain unchanged. The changes in traffic pattern will only be due to the additional traffic indued by the annual population/traffic growth in the area.

#### 4.2 Future Traffic Growth

Historical Growth from the Annual Traffic Census (ATC) Data

4.2.1 In order to establish the traffic growth rate in the vicinity of the study area, reference was made to the ATC Reports published by Transport Department, reporting on the annual average daily traffic (AADT) flows at counting stations in the territory. The details of the counting stations and the recorded counts in vicinity are shown in **Table 4.1**.

Table 4.1 Annual Traffic Census Data

Stn.	Road Section		Annual Average Daily Traffic (percentage change)				Average Annual		
No.	Road	From	То	2018	2019	2020	2021	2022	Growth
5659	Keung Shan Rd & Tai O Rd	Sham Wat Rd	Tai O Bus Terminus	1,160	1,150	1,430	1,530	1,470	6.1%
5256	Tung Chung Rd	South Lantau Rd	Chung Yan Rd	5,210	4,750	4,570	4,790	4,580	-3.2%
5859	South Lantau Rd & Keung Shan Rd	Tung Chung Rd	Sham Wat Rd	2,750	2,730	2,620	2,850	2,710	-0.4%
Total			9,120	8,630 (-5.4%)	8,620 (-0.1%)	9,170 (+6.4%)	8,760 (-4.5%)	-1.0%	

Note: (1) Figures in bracket indicate the percentage change between successive years.

4.2.2 **Table 4.1** shows that the AADTs at the concerned ATC stations have an overall annual growth rate of -1.0% between the years 2018 to 2022.

Projected Growth from Population Projection in the Territorial Population Data Matrix (TPEDM)

4.2.3 Reference was also made to the Projection of Population Distribution by Tertiary Planning Unit (Planning Department) and the data are summarized in **Tables 4.2**.

Table 4.2 Projection of Population Distribution by Tertiary Planning Unit

Tertiary	Projection of	Annual			
Planning Unit	2024	2025	2026	2027	Growth Rate (% p.a.)
932, 934, 941, 942 & 943	2,700	2,700	2,700	2,700	0.0%
944	3,700	3,700	3,700	3,700	0.0%
Total	6,400	6,400	6,400	6,400	0.0%

- 4.2.4 As shown in **Table 4.2**, there will be no increase in the population of Tai O area. Therefore, the increase in traffic of Tai O Road will be limited as Tai O Road is classified as a closed road. Road permits issued by the Transport Department are required to drive along Tai O Road under "Driving on Lantau Island Scheme".
- 4.2.5 All roads on South Lantau are closed roads, motorists who wish to access the closed roads are required to hold a valid Lantau Closed Road Permit (LCRP). Therefore, only authorized vehicles are allowed to enter the designated restricted zones during specified hours. Vehicles without permits are restricted from entering the restricted zones or face penalties. As such, the future traffic condition can still be regulated by the authority under the permit system and the overall volume of vehicles can be controlled.
- 4.2.6 Moreover, as there will be no change in the number of niches of the proposed columbarium as compared with the existing situation, it will not induce significant additional traffic impact on the nearby roads.

#### 5 SUMMARY AND CONCLUSIONS

## 5.1 Summary

- 5.1.1 The application premises lies at the ground of two existing 2-storey buildings (Building 1 and Building 2) within a religious institution, namely Lung Ngam Monastery (the Monastery), at the eastern fringe of Tai O area. The application premises falls within the "Government, Institution or Community" ("G/IC") zone on the Approved Tai O Fringe Outline Zoning Plan (OZP) No. S/I-TOF/2. In order to comply with the town planning requirements, a planning application under Section 16 of Town Planning Ordinance is required for the existing columbarium use at the Site to meet the planning aspect requirements.
- 5.1.2 There is no vehicular access connecting the Monastery. The same arrangement will be maintained in the proposed (existing) columbarium development. As the existing buildings are not equipped with a vehicular access, no car parking and loading/unloading facilities are being provided. Meanwhile, there is no standard requirement for car parking and loading/unloading provisions with respect to the columbarium development under the current Hong Kong Planning Standards and Guidelines (HKPSG).
- 5.1.3 At present, all visitors are well aware of nil parking provision within the Monastery and they used to travel to/from the Monastery by public transport or on foot. It is anticipated the same travelling pattern will be maintained upon obtaining the planning approval and the license. According to the applicant, all necessity deliveries are conducted by hands from the nearby local stores once per month together with the necessity deliveries for the Monastery. In view the deliveries will be still conducted by hands, no loading/unloading provision is required within the Site.
- 5.1.4 A pedestrian count was conducted on the 2024 Ching Ming Day and the survey result indicated that there were a total of 1,487 visitors on that day. The arriving peak hour occurred at 11:00 am and the visitor number is 357. The questionnaire survey results showed among the surveyed number of 1,214 visitors, most of the visitors were by bus and on foot.
- 5.1.5 The proposed columbarium development is anticipated to operate continuously similar to the existing columbarium. Since no additional niches will be added to the application premise, the traffic conditions for visiting the proposed columbarium will remain unchanged and it will not induce significant additional traffic impact on the nearby roads.

#### 5.2 Conclusions

5.2.1 The findings of this traffic impact assessment indicated that the impact of the additional unoccupied niches will not induce significant traffic impact to the surrounding. The proposed (existing) columbarium development is considered acceptable in traffic engineering viewpoint.

