

Appendix B

Assessment Report for LOS for Public Footpath

**Proposed Columbarium at Lot NKIL 6071 (Portion)
& STT KX1603 (Portion), Ching Cheung Road**

Assessment Report for LOS for Public Footpath

(April 2024)



先歷工程管理及顧問有限公司
Construction Managers And Consulting Engineers Limited

Assessment for LOS for Public Footpath

The peak hour pedestrian trips observed during the peak operational season Ching Ming Festival (Survey period: 4th April 2024 from 7th April 2024) are adopted for assessing the level of services (LOS) of public footpath. **Table 1** shows the observed peak-15 minutes pedestrian flows at the public footpath and the locations of the concerned pedestrian links are shown in **Drawing No. T001**.

Table 1 Observed Peak-15 Minute Pedestrian Trips

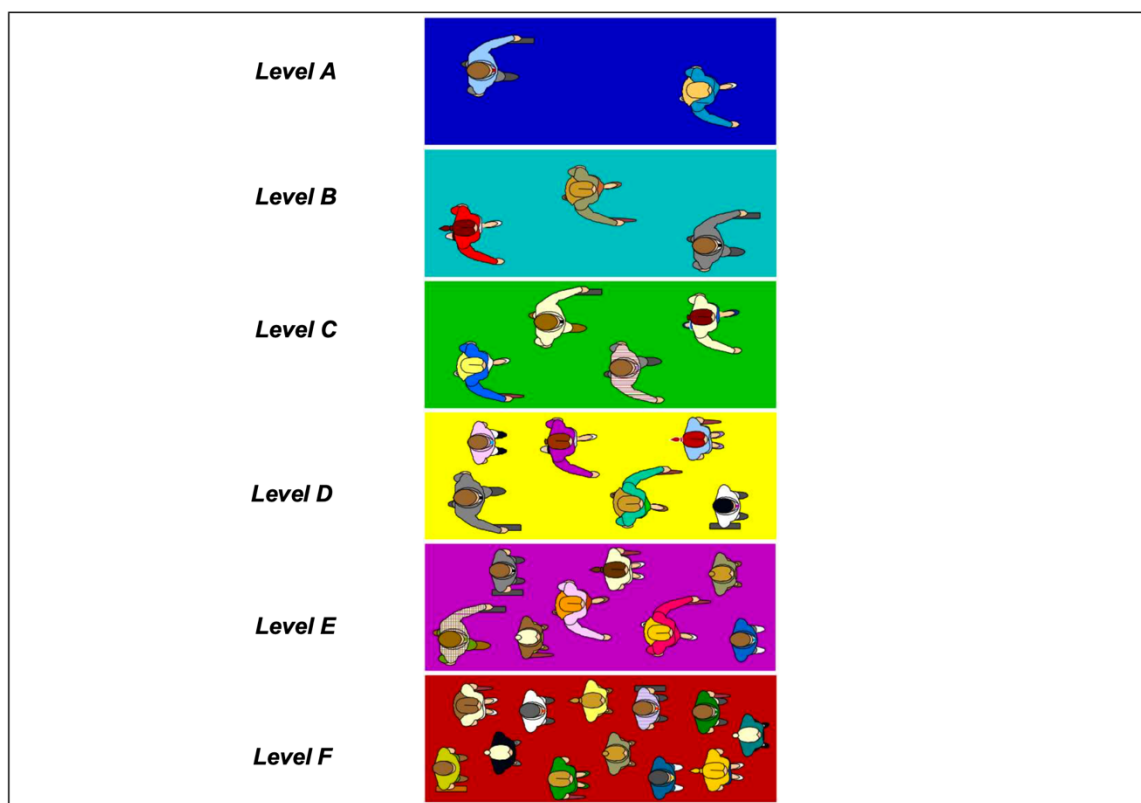
ID	Location	AM Peak 15-min Flows			PM Peak 15-min Flows		
		Out	In	Total	Out	In	Total
P1	Stair near Wing Tak Road	20	32	52	35	19	54
P2	Footpath at Bridge Deck	22	30	52	31	20	51
P3	Stair up hill	17	23	40	24	19	43
	Total	59	85	144	90	58	148

The performances of footpaths P2 is assessed based on the Level of Service (LOS) method in accordance with the Transport Planning and Design Manual (Chapter 10.4.2, Volume 6). The definitions of different level of LOS on footpaths are described in **Table 2** and shown graphically in **Exhibit-1**.

Table 2 Description of Level-of-Service (LOS) on Footpaths

LOS	Flow Rate (ped/min/m)	Description
A	≤ 16	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
B	16 - 23	Sufficient space is provided for pedestrians to freely select their walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths.
C	23 - 33	Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in unidirectional stream. Where reverse direction or crossing movement exists, minor conflicts will occur, and speed and volume will be somewhat lower.
D	33 - 49	Freedom to select individual walking speeds and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflicts is high and its avoidance requires changes of speeds and position. The LOS provides reasonable fluid flow; however considerable friction and interactions between pedestrians are likely to occur.
E	49 - 75	Virtually, all pedestrians would have their normal walking speeds restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass over slower pedestrians. Cross- and reverse-movement are possible only with extreme difficulties. Design volumes approach the limit of walking capacity with resulting stoppages and interruptions to flow.
F	> 75	Walking speeds are severely restricted. Forward progress is made only by shuffling. There are frequent and unavoidable conflicts with other pedestrians. Cross- and reverse-movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristics of queued pedestrians than of moving pedestrian streams.

Exhibit-1 Graphical Presentation of Level of Service (LOS)



The performance of P1 and P3 assessed with reference to the guidelines in Highway Capacity Manual 2010 and as described in **Table 3**.

Table 3 Description of Level-of-Service (LOS) for Stairs

LOS	Flow Rate (ped/min/m)	Description
A	≤ 16	Sufficient area is provided to freely select locomotion speed, and to bypass other slower-moving pedestrians. No serious difficulties would be experienced with reverse traffic flows.
B	16 – 20	Lower range of area occupancy, some difficulties would be experienced in passing slower pedestrians. Reverse flows would cause minor traffic conflicts.
C	20 – 26	Locomotion speeds would be restricted slightly, due to an inability to pass slower-moving pedestrians. Minor reverse traffic flows would encounter some difficulties.
D	26 – 36	Locomotion speeds are restricted for the majority of persons, due to the limited open tread space and an inability to bypass slower-moving pedestrians. Reverse flows would encounter significant difficulties and traffic conflict.
E	36 – 49	Virtually all persons would have their normal locomotion speeds reduced, because of the minimum tread length, space and inability to bypass others, intermittent stoppages are likely to occur. Reverse traffic flows would experience serious conflict.
F	> 49	Completed breakdown in traffic flow, with many stoppages.

Since the niches is only 37% occupied during the time of survey. The counted Peak 15-min Flows will be multiplied by 5 for assessment of LOS. The LOS of P1, P2 and P3 for the future are assessed and the results are indicated in **Table 4**.

Table 4 Level of Services (LOS) Assessment Results

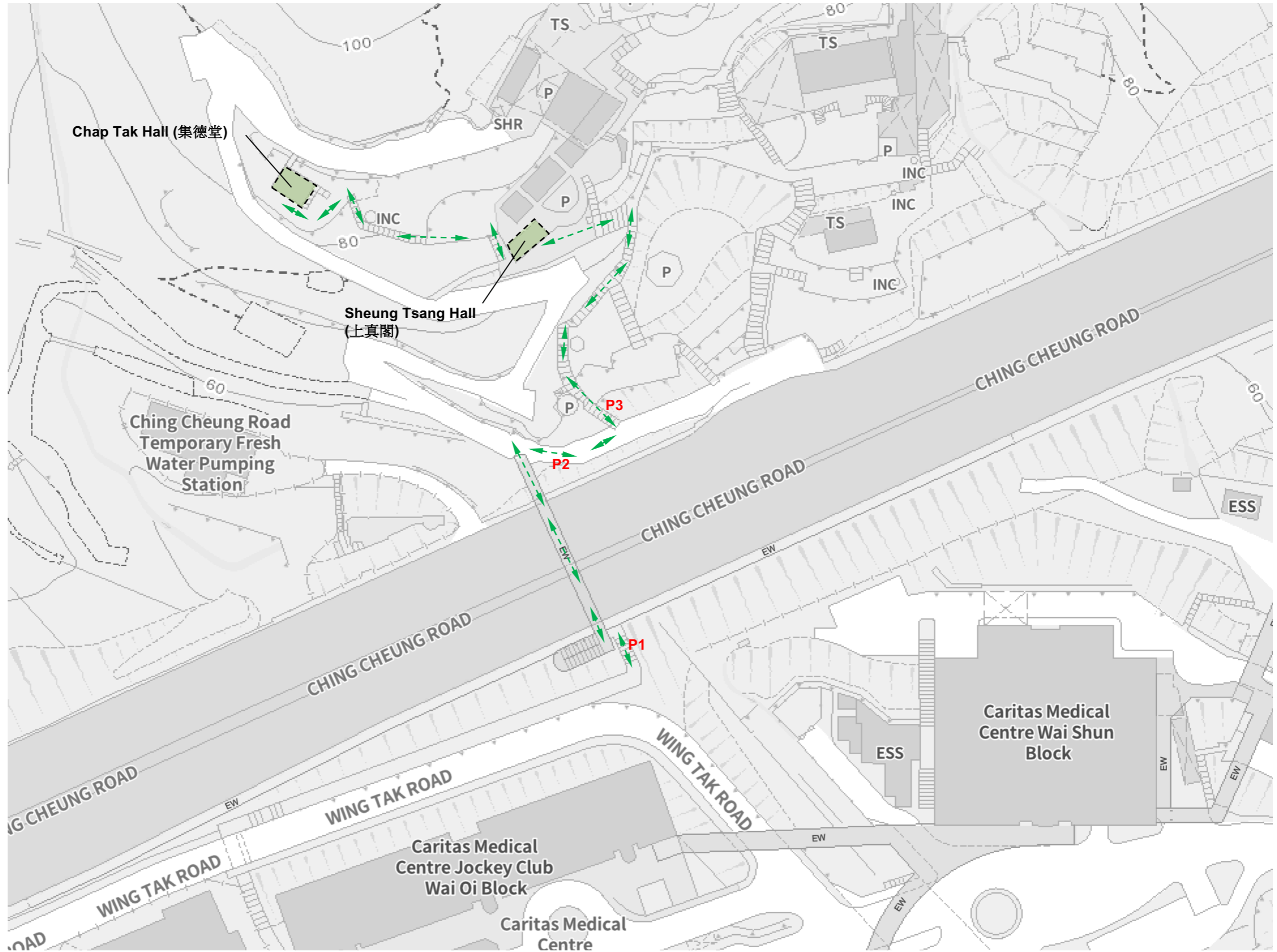
Location ⁽²⁾	Effective Width ⁽¹⁾	AM Peak Hour			PM Peak Hour		
		OutPeak 15-min 2-way Flow	Flow Rate (ped/min/m)	LOS	OutPeak 15-min 2-way Flow	Flow Rate (ped/min/m)	LOS
P1	1.7	260	10.2	A	270	10.6	A
P2	1.2	260	14.4	A	255	14.2	A
P3	1.3	200	10.3	A	215	11.0	A

Notes: (1) Effective width = Actual width minus 1.0m shy zone

(2) Refer to Drawing No. T001 for location of pedestrian link

Conclusion

The results indicate that LOS A could be achieved at all the concerned footpaths for both the AM and PM peak hours, i.e. indicating that the pedestrian links have sufficient capacity to accommodate the pedestrian flows.



--- Pedestrian Access Route

P1 Assessment Point



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Job Title
Section 16 planning application for proposed columbarium at Lot NKIL 6071 (Portion) & STT KX1603 (Portion), Ching Cheung Road
Drawing Title
Pedestrian Access Route

Scale As shown

Drn. HC Date 03/24 Chd. Passed

Job No. 2022C003

Dwg. No. T001