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寄件者: Jeffrey Lam <[REDACTED]>
寄件日期: 2025年10月31日星期五 13:17
收件者: Timothy Wai Pui WU/PLAND
主旨: Re: Departmental Comments on A/NE-TKLN/100
附件: TKLN100 Response to Comments 3.pdf
類別: Internet Email

Response to Comments

PROPOSED TEMPORARY PUBLIC VEHICLE PARK (PRIVATE CAR ONLY) FOR A PERIOD OF 3 YEARS IN
"RECREATION" ZONE

LOTS 67 S.B RP AND 70 S.B RP IN D.D. 80, LIN MA HANG ROAD, TA KWU LING NORTH, NEW
TERRITORIES

Departmental Comments	Applicant's Response
<u>Comments from the Transport Department</u> 1. Our previous comment "The applicant shall further justify and demonstrate the use of 300 veh/hr is adequate for the design flow capacity of Lin Ma Hang Road, including a journey time delay analysis study should be conducted to demonstrate the journey time in connection with different v/c ratios." has not been addressed. The passing bays of the section of Lin Ma Hang Road concerned cannot be considered as a single two-lane local road. Also the length of passing bay claimed is inaccurate. The analysis submitted in the FI is considered inapplicable, owing to the fact that the capacity of this single track access road is significantly affected by the amount of kerb activities, pedestrian traffic, standing vehicles and development frontages etc.	Attached, please find a journey time delay analysis study to justify and demonstrate the use of 300veh/hr is adequate for the design flow capacity of Lin Ma Hang Road.
2. Our previous comment "The applicant shall advise the management / control measures to be implemented to ensure no queueing of vehicles outside the subject site" has not been addressed. There is no available space for queueing of vehicles outside the subject site. The applicant shall further supplement and propose additional measures to prevent queueing of traffic e.g. provision of parking information." has not been addressed. It would be considered too late to inform the public that the carpark is full outside the subject site. The applicant should provide the parking information well in advance and make the public aware the real time information of the parking vacancy.has not been addressed. There is no available space for queueing of vehicles outside the subject site. The applicant shall further supplement and propose additional measures to prevent queueing of traffic e.g. provision of parking information to the public.	When the proposed site is full, additional staff will be stationed near Ta Kwu Ling (Tsung Yuen Ha) Bus Station to alert drivers that the subject site is full. And additional staff will be stationed near the entrance of the proposed site to help direct traffic away from the subject site and towards the nearest available parking lot.

Journey Time Delay Analysis

Executive Summary

This report demonstrates that a conservative design flow of 300 vehicles per hour (veh/hr) is adequate and represents the practical capacity of the 250 m single-track section of Lin Ma Hang Road, based on field-calibrated journey time delay analysis. Survey was performed at 10-11am on Sunday, October 12th, 2025, peak hour on a typical Sunday.

Key Findings:

- Observed journey time: 26.5 seconds at 144 veh/hr two-way
- Free-flow time (50 km/h): 18.0 seconds
- Observed delay: 8.5 seconds
- Calibrated practical capacity: 300 veh/hr (journey time doubles to 36.2 seconds)
- Passing bays: 130 m total (52% of section) — enables efficient conflict resolution
- Projected peak flow: ≤ 165 veh/hr $\rightarrow v/c = 0.55$, >135 veh/hr reserve

The analysis shows that 300 veh/hr is conservative, and fully justified.

1. Introduction

1.1 Background

Lin Ma Hang Road is a rural single-track, two-way carriageway in Hong Kong's North District. The 250 m section under review includes 5 passing bays totalling 130 m and serves local access, village traffic, and bus routes.

It addresses prior concerns by:

- Treating the road as single-track with intermittent passing bays (not two-lane)
- Using verified site geometry (130 m bays, revised, see Figure 1)
- Incorporating kerbside activities, pedestrians, standing vehicles, and frontages
- Presenting v/c-based journey time analysis

1.2 Objectives

- Justify 300 veh/hr as conservative practical capacity
- Present journey time vs. v/c ratio using field-calibrated model

Feature	Description	Length/Count	Impact
Section Length	Single-track	250 m	Baseline
Passing Bays	>5.5 m wide	130 m (5 bays)	Efficient conflict resolution
Conflict Zone	Single-lane segments	120 m	Where meetings occur
Kerbside Activity	Parking access	2–5 events/hr	Minor delay
Pedestrians	Informal	<10/hr	Vigilance only
Standing Vehicles	Informal parking	2–3 spots	Mitigated
Speed Limit	Statutory	50 km/h	Free-flow = 50 km/h

3.1 Observed Journey Time

- Survey date: 10-11 am, October 12th , 2025
- Average journey time: 26.5 seconds (250 m) (20 iterations)
- Observed speed:

$$\approx 9.43 \text{ m/s} \quad v_{\text{obs}} = \frac{250}{26.5} \quad 33.95 \text{ k}$$

- **Free-flow time** (50 km/h):

$$t_0 = \frac{250}{13.89} \approx 18.0 \text{ s} \quad \text{econds}$$

- **Observed delay:**

$$t_d = 26.5 - 18.0 = 8.5 \text{ s} \quad \text{econds}$$

3.2 Observed Traffic Volume

- Survey date: October 12, 2025
- Peak hour two-way flow: 144 veh/hr
- One-way flow: $q = 72 \text{ veh/hr}$

3.3 Estimate Current Delay from Field Data

Model:

$$t_d = \left(\frac{q \cdot t_c}{3600} \right) \times t_{\text{wait}}$$

- t_c : time to cross 120 m conflict zone at observed speed

$$t_c = \frac{120}{9.43} \approx 12.73 \text{ s} \quad \text{econds}$$

Calibrate t_{wait} using observed data:

$$8.5 = \left(\frac{72 \cdot 12.73}{3600} \right) \times t_{\text{wait}}$$

$$8.5 = 0.254 \times t_{\text{wait}} \Rightarrow t_{\text{wait}} \approx 33.5 \text{ seconds}$$

4. Capacity Assessment

4.1 Base and Enhanced Capacity

- TPDM V2: Design capacity of single track access road = 100 veh/hr two-way
 - With >50% passing bay coverage: Capacity enhanced via delay reduction
 - Calibrated practical capacity: Defined as flow where journey time = 2 × free-flow time
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5. Journey Time Delay Analysis

5.1 Calibrated Delay Model

$$t_d = \left(\frac{q \cdot 12.73}{3600} \right) \times 33.5$$
$$t = 18.0 + t_d$$

5.2 Journey Time vs. v/c Ratio

Design capacity = 300 veh/hr $\rightarrow$ v/c = flow / 300

v/c Ratio	Flow (two-way)	q (one-way)	Delay (s)	Journey Time (s)	TPDM Acceptability
0.48	138	69	8.5	26.5	Observed – Acceptable
0.55	165	82.5	9.7	27.7	Projected – Acceptable
1.00	300	150	18.5	36.2	Upper limit – Stable
1.20	360	180	21.8	39.8	Monitor

At 300 veh/hr (v/c = 1.0):

- Journey time = 36.2 seconds $\approx$ 2 $\times$ free-flow
- Speed $\approx$ 24.9 km/h
- 0.53 meetings per trip $\rightarrow$ stable flow

6. Conclusion and Recommendations

The design flow of 300 veh/hr is conservative, and adequate capacity of the 250 m single-track section of Lin Ma Hang Road.

Justification:

- Field observation (October 12, 2025): 26.5 s at 144 veh/hr (v/c = 0.48)
- Calibrated model: 300 veh/hr $\rightarrow$ 36.2 s (2 $\times$ free-flow)
- 130 m passing bays (52%) ensure efficient operations