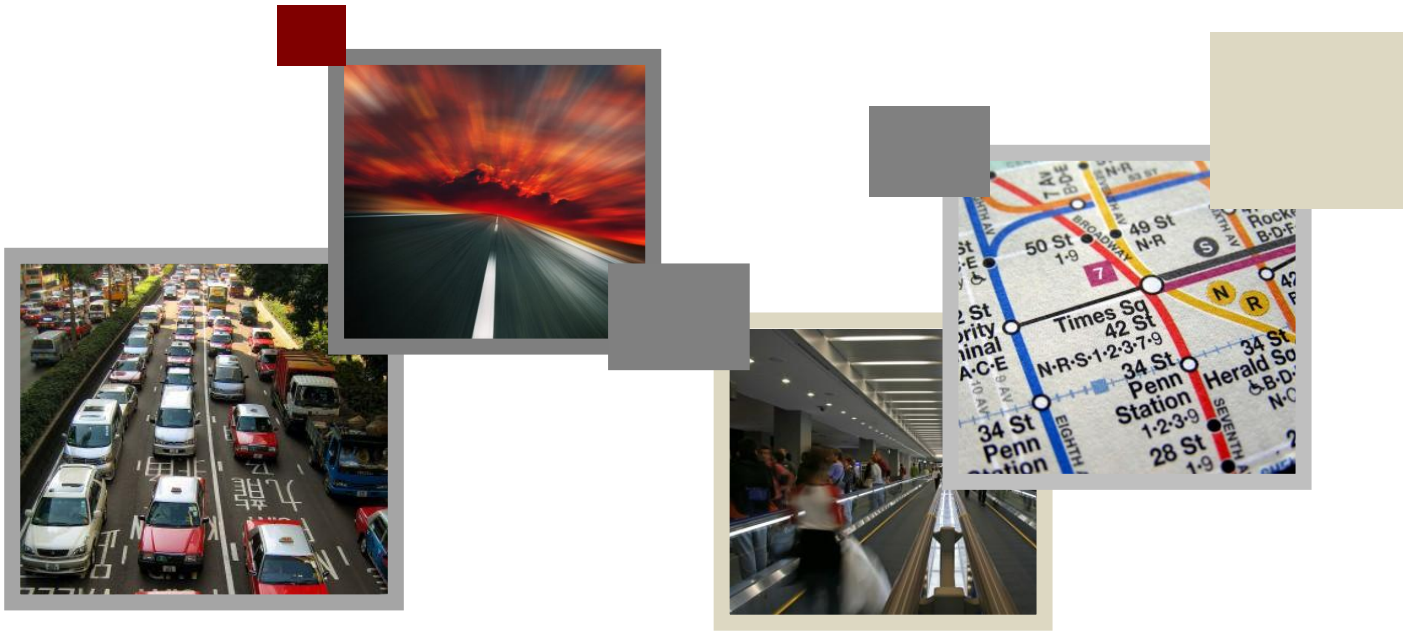
Traffic Impact Assessment for Section 16 Planning Application A/NE-LYT/841 for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, New Territories



TRAFFIC IMPACT ASSESSMENT REPORT

Reference: 31064-R01-01
Date: July 2025

AXON
CONSULTANCY

Contents

1 Introduction

1.1 Background

The Applicant intends to seek Town Planning Board ("TPB") approval for a Section 16 Planning Application No. (A/NE-LYT/841) for a Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, New Territories (hereafter "the proposed development").

In the Approved Lung Yeuk Tau & Kwan Tei South Outline Zoning Plan No. S/NE-LYT/19 (referred to as the "OZP"), the Application Site is zoned as “Agriculture” and “Residential (Group C)” uses, in which "Open Storage" use does not fall into either column 1 or column 2 of the Schedule of Uses. Consequently, obtaining planning permission from TPB is necessary for the proposed open storage in a temporary basis under Section 16 of the Town Planning Ordinance, based on the TPB Guideline PG-No. 13G.

AXON Engineering & Consulting Limited (AXON) was commissioned to carry out a Traffic Impact Assessment (TIA) report for the proposed development.

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 and development schedules;

Chapter 3 – 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 4 – Future Traffic Situation, which presents the design year future traffic flows under reference and design scenarios based on the assumed annual growth rate considered the planned adjacent developments;

Chapter 5 – Transport Provisions, which presents the traffic arrangements and provisions of internal transport facilities for the proposed development;

Chapter 6 – Summary and Conclusion, which summarizes the key findings and conclusions regarding traffic impacts and management measures.

2 The Proposed Development

2.1 The Application Site

The Application Site has an approximate area of 15,090 m^2 and by Lots 731 (Part), 745 RP (Part), 749 (Part), 750 (Part), 751 S.A (Part), 751 RP (Part), 752 (Part), 753 S.A, 753 RP (Part), 754 (Part), 757 (Part), 758 (Part), 759 (Part), 761 (Part), 777 (Part) and 778 (Part) in D.D. 83 and Adjoining Government Land, Lung Yeuk Tau, New Territories. The site location is shown in **Figure 2.1**.

2.2 The Proposed Development

The proposed development involves constructing a temporary open storage of construction materials and machineries with ancillary facilities for a period of 3 years and associated filling of land. The operating hours for the proposed development are from Monday to Saturday, 09:00 to 19:00, except Sundays and public holidays. The operation of the proposed developemt is mainly supported by 7 meters light goods vehicles and 5 meters private cars.

Access to the site is exclusively via Hai Wing Road, which is a single-track access road. As a result, the Applicant intends to prohibit the access for vehicles exceeding 7 meters in length. All vehicle entries and exits are by appointment only to control the vehicle access.

The parameters for the development are summarized in **Table 2.1** below:

Table 2.1 Development Parameter

Design Parameter	Quantity of Proposed Development Parameter
Lot No.	Lots 731 (Part), 745 RP (Part), 749 (Part), 750 (Part), 751 S.A (Part), 751 RP (Part), 752 (Part), 753 S.A, 753 RP (Part), 754 (Part), 757 (Part), 758 (Part), 759 (Part), 761 (Part), 777 (Part) and 778 (Part) in D.D. 83 and Adjoining Government Land, Lung Yeuk Tau, New Territories
Application Area	About 15,090 m^2
Zoning	“Agriculture” and “Residential (Group C)” uses
Operation Year	2025 - 2028
Longest Vehicle for Delivery of Materials	7 meters Light Goods Vehicle

3 Existing Traffic Situation

3.1 Existing Road Network

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

Sha Tau Kok Road – Lung Yeuk Tau functions as a rural road for the segment between On Kui Street and Lau Shui Heung Road, while it acts as a primary distributor for the section between Jockey Club Road and On Kui Street, as well as a district distributor for the portion between San Wan Road and Jockey Club Road. This road runs in the east-west direction, connecting Fanling and Twan Tei. The portion linking Lau Shui Heung Road to Jockey Club Road is designed as a dual-two carriageway, while the section between Jockey Club Road and San Wan Road consists of a single-two carriageway.

Lung Ma Road is a single-two carriageway, that stretches in the north-south direction, providing connection between Sha Tau Kok Road – Lung Yeuk Tau and Hai Wing Road.

Hai Wing Road is a single-track access road, serving the local community and proposed development.

Dao Yang Road is a single-track access road, serving the local community.

3.2 Vehicular Ingress/Egress Arrangement

The proposed development benefits from well-established vehicular ingress and egress routes:

Ingress Route

Motorists traveling from New Territories, Kowloon, or Hong Kong Island primarily use the Heung Yuen Wai Highway to access the site. The designated route includes Sha Tau Kok Road – Ma Mei Ha, Sha Tau Kok Road – Lung Yeuk Tau, Dao Yang Road, leading to the final approach via Hai Wing Road.

Egress Route

Vehicles leaving the site follow the reverse route via Hai Wing Road, merging onto Heung Yuen Wai Highway through the Dao Yang Road and Sha Tau Kok Road – Lung Yeuk Tau and Sha Tau Kok Road – Ma Mei Ha, proceeding to their respective destinations in the New Territories, Kowloon, or Hong Kong Island.

The detailed ingress/egress arrangement is illustrated in **Figure 3.1**.

3.3 Traffic Count Surveys

To appraise the existing traffic conditions, classified turning movement count surveys have been carried out at the key junctions of the surrounding road network, as shown in **Figure 3.2**, on a normal weekday in June 2025 from 09:00 to 19:00, which aligns with the operational hours of the proposed development.

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

The peak hours in the morning (AM) and evening (PM) for the road network during development operational hours on a typical weekday are recognized as 09:00 to 10:00 and 17:00 to 18:00, respectively. The observed traffic flows of the key junctions are presented in **Figure 3.3**.

3.4 Existing Junction 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. The results of these assessments are summarized in **Table 3.1**, while the detailed junction calculation sheets can be found in **Appendix A**.

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.

Table 3.1 Existing Junction Performance

Jun No.	Junction Location	Type / Capacity Index *	AM Peak	PM Peak
Jn A	Sha Tau Kok Road - Lung Yeuk Tau / Hai Wing Road	Priority/ DFC	0.08	0.06
Jn B	Sha Tau Kok Road - Lung Yeuk Tau / Lung Ma Road / Access Road	Roundabout/ DFC	0.45	0.45

*Notes: * DFC - Design Flow / Capacity Ratio*

As depicted in **Table 3.1**, all key junctions currently operate below their maximum capacities during the identified peak.

Link capacity assessment

Link Capacity Assessments are carried out at the key road links in accordance with Transport Planning and Design Manual ("TPDM") Volume 2. The results of the link capacity assessment are summarised in **Table 3.2.**

The performance of a link of carriageway is indicated by its Peak Hourly Flows/Design Flow Ratio (P/Df). A P/Df value of 0.85 or below is considered within an acceptable level without causing undue delay to motorists passing through the concerned link section.

Table 3.2 Existing Link Performance

Link No.	Section of Carriageway	Design Flow (pcus/hr)	Observed Scenario Peak Hourly Flows		Peak Hourly Flows/ Design Flow Ratio (P/Df)	
			AM Peak	PM Peak	AM Peak	PM Peak
L1	Hai Wing Road (Section between Dao Yang Road and proposed development)	128 [(a)]	12	20	0.09	0.16
L2	Dao Yang Road (Section between Sha Tau Kok Road and Hai Wing Road)	128 [(a)]	50	45	0.39	0.35

Notes: (a) The design flow of a single-track access road = 100 veh/hour (capacity for single-track access road) x 1.28 pcu factor = 128 pcus/hour.

As depicted in **Table 3.2**, all key links currently operate below their maximum capacities during the identified peak.

3.5 Public Transport

Public transport services including franchised buses and green minibuses (GMB) in the vicinity are depicted in **Figure 3.4** and summarised in **Table 3.3** and **Table 3.4**.

Table 3.3 Franchised Buses Services

Operator	Route No.	Destination
CTB	78C	Queen's Hill Fanling ↔ Kai Tak
CTB	78X	Kai Tak → Queen's Hill Fanling [(b)]
		Queen's Hill Fanling → Kai Tak [(c)]
CTB	79	Queen's Hill Fanling ↔ Tai Wai

Operator	Route No.	Destination
KMB	79K	Sheung Shui ↔ Ta Kwu Ling (Tsung Yuen Ha)
		Ta Kwu Ling (Tsung Yuen Ha) → Fanling Station [(a)]
		Fanling Station → Ta Kwu Ling (Tsung Yuen Ha) [(b)]
CTB	79P	Queen's Hill Fanling → High Speed Rail West Kowloon Station [(a)]
		High Speed Rail West Kowloon Station → Queen's Hill Fanling [(b)]
CTB	79X	Queen's Hill Estate ↔ Cheung Sha Wan (Kom Tsun Street)
KMB	277A	Sha Tau Kok → Lam Tin Station [(d)]
		Lam Tin Station → Sha Tau Kok [(e)]
CTB	679	Queen's Hill Fanling → Central (Hong Kong Station) [(a)]
		Central (Hong Kong Station) → Queen's Hill Fanling [(b)]
CTB	979	Queen's Hill Fanling → Central (Hong Kong Station) [(a)]
		Central (Hong Kong Station) → Queen's Hill Fanling [(b)]
KMB	N78	Sha Tau Kok ↔ Sheung Shui [(f)]

Note: (a) Service Period: Mondays to Fridays – Morning Service
(b) Service Period: Mondays to Fridays – Afternoon Service
(c) Service Period: Mondays to Fridays – Morning and Afternoon Service
(d) Service Period: Mondays to Fridays – Morning Service; Holidays – Afternoon Service & Saturdays – Morning & Afternoon Service
(e) Service Period: Mondays to Fridays – Afternoon Service; Holidays – Morning Service & Saturdays – Morning & Afternoon Service
(f) Service Period: Daily – Overnight Service

Table 3.4 Green Minibus (GMB) Services

Route No.	Destination
52K	Fanling Station ↔ Ping Che

4 Future Traffic Situation

4.1 Design Year Road Network

The design year will be determined as either three years following the completion year of 2025 or five years after the application year of 2025 (not applicable), depending on which period is longer. Therefore, the year 2028 has been chosen as the design year for this study.

For the Design Year 2028, the Growth Factor Method is employed to forecast traffic. This method utilizes the historical data from Annual Traffic Census Data (ATC) and demographic trends from the "2021 – based Territorial Population and Employment Data Matrix" ("TPEDM") to predict future traffic volumes. The higher growth factor from these sources is chosen for a conservative traffic estimate.

A review of upcoming road and junction improvement projects reveals few expected changes to the current road network. 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.

4.2 Development Traffic Generation

In accordance with the information provided by the Applicant, the stored construction materials and machinery are primarily small-to-medium sized components, including items such as short steel bars (not exceeding 4m), timber planks, concrete bricks, road barriers, and hand tools. Machinery to be stored on-site is mainly compact equipment suitable for transport by small trucks. As the site does not accommodate any large precast units or heavy plant, only light goods vehicles (not exceeding 7 metres in length) and private cars will be used for deliveries and access. No heavy or large trucks will be permitted.

It is also noted that the proposed development primarily serves a storage function rather than active processing or logistics operations. As such, the vehicular trip generation is inherently low, given that stored construction materials and machinery are not moved in and out on a frequent basis. The majority of site activities involve static storage, and vehicle access is by appointment only, further limiting traffic flow. This operational nature aligns with the conservative trip assumptions adopted and substantiates that the overall traffic impact remains minimal.

The peak hour traffic trip generation and attraction are provided by the Applicant. The development trips are detailed in **Table 4.1**.

Table 4.1 Development Traffic Generation

Use	Generation		Attraction	
	AM Peak	PM Peak	AM Peak	PM Peak
Private Car Trips (pcus/ hour) [(a)]	0	2	2	0
Light Goods Vehicle Trips (pcus/ hour) [(a)]	0	2	5	0
Total(pcus/ hour)	0	4	7	0

Note: (a) The information contained in the "申請報告書" submitted by the Applicant indicates that during the AM Peak Hour (09:00 – 10:00), the proposed development is expected to attract 2 private car trips and 3 LGV trips. Considering the pcu factors of 1 for private cars and 1.5 for LGVs, it is determined that this would result in 2 pcu for private cars and 5 pcu for LGVs, totalling 7 pcu per hour. Likewise, during the PM Peak Hour (17:00 – 18:00), the proposed development is projected to generate 2 private car trips and 1 LGV trip, which correspond to 2 pcu and 2 pcu respectively; thus, the overall generation would amount to 4 pcu per hour.

As shown in **Table 4.1**, the proposed development would attract 7 pcus in AM peak hour and generate 4 pcus in PM peak hours. The development traffic has been distributed and assigned to the existing road network.

4.3 Regional Traffic Growth

To estimate traffic flows for the design year 2028, it is proposed to adjust the existing traffic flows to reflect anticipated natural traffic growth.

Annual Traffic Census (ATC)

Reference has been made to the 2018 to 2023 Annual Traffic Census Reports, published by the Transport Department. The traffic data recorded at counting stations adjacent to the Application Site are shown in **Table 4.2**.

Table 4.2 Annual Traffic Census Data

No.	Link	From	To	Road Type*	2020	2021	2022	2023	Growth Rate p.a.
5041	Lung Shan Tunnel	Fanling Highway	Sha Tau Kok Road	RT	13,840	16,870	16,400	20,630	+14.23%
5660	Sha Tau Kok Rd	On Kui St	Ping Che Rd	RR	23,740	22,980	22,280	22,810	-1.32%
5860	Sha Tau Kok Rd	Ping Che Rd	Shun Lung St	RR	6,300	5,970	4,900	5,010	-7.35%
6653	Ping Che Rd	Sha Tau Kok Rd	Lin Ma Hang Rd	DD	11,030	11,870	11,510	12,150	+3.28%
Total					54,910	57,690	55,090	60,600	**+3.34%**

*Note: * RT= Rural Trunk; RR = Rural Road & DD = District Distributor*

Table 4.2 presents the traffic flow information spanning four 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 (Lung Shan Tunnel section). Based on Annual Traffic Census Reports 2020 to 2023, 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 **+3.34%**.

Projected Population Data

According to the report "2021 – based Territorial Population and Employment Data Matrix" ("TPEDM") published by the Planning Department, the population growth data from year 2021 to 2031 in North District Council District are presented in **Table 4.3**.

Table 4.3 2021-Based TPEDM Data

District Council District	Population			Avg. Annual Growth
	2021	2026	2031	
North	309650	352000	435550	**+3.47%**

The data indicate the growth in population in North District at an annual rate of **+3.47%** from 2021 to 2031.

Since the growth rates derived from both historical traffic data and future planning data, an annual growth rate of **+3.47%** has been adopted for conservative forecasting purposes. This growth factor will be applied to the traffic flows observed in 2025.

4.4 Major Planned/ Committed Developments

The forecast considers major planning applications or committed developments in proximity to the site. Following a comprehensive investigation, it has been determined that there are no substantial planning applications or committed developments that would result in a notable traffic impact in Lung Yeuk Tau & Kwai Tel.

4.5 Reference and Design Flows

The growth factor will be applied to the traffic flows of 2025 Observed Peak Hours, to estimate the 2028 Reference Flows and 2028 Design Flows. The reference and design flows for year 2028 are calculated from the following formulae:

2028 Reference Flows = 2025 Observed Flows x $(1+3.47\%)^3$
2028 Design Flows = 2028 Reference Flows + Proposed Development Traffic

Figure 4.1 shows the 2028 Reference Peak Hours Flows in the. By adding the development traffic, **Figure 4.2** shows the 2028 Design Peak Hours Traffic.

4.6 Future 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 4.4** with detailed calculation sheets attached in **Appendix A**.

Table 4.4 Future Junction Performance

Jun No.	Junction Location	Type / Capacity Index *	Reference Scenario		Design Scenario	
			AM Peak	PM Peak	AM Peak	PM Peak
Jn A	Sha Tau Kok Road - Lung Yeuk Tau / Hai Wing Road	Priority/ DFC	0.09	0.07	0.10	0.07
Jn B	Sha Tau Kok Road - Lung Yeuk Tau / Lung Ma Road / Access Road	Roundabout/ DFC	0.51	0.51	0.51	0.51

*Notes: * DFC - Design Flow / Capacity Ratio*

As shown in **Table 4.4**, the capacities of all key junctions are expected to perform satisfactorily during peak periods in both Reference and Design Scenarios. Furthermore, the traffic impact on the adjacent junctions induced by the development traffic would be negligible.

Link capacity assessment

Link capacity assessments were carried out for the major road link in the local road network for both the Reference and Design scenarios. The results are summarised and presented in **Table 4.5** and **Table 4.6** respectively.

Table 4.5 Future Link Performance (Reference Scenario)

Link No.	Section of Carriageway	Design Flow (pcus/hr)	Reference Scenario Peak Hourly Flow		Peak Hourly Flows/ Design Flow Ratio (P/Df)	
			AM Peak	PM Peak	AM Peak	PM Peak
L1	Hai Wing Road (Section between Dao Yang Road and proposed development)	128 [(a)]	13	23	0.10	0.18
L2	Dao Yang Road (Section between Sha Tau Kok Road and Hai Wing Road)	128 [(a)]	56	51	0.44	0.40

Notes: (a) The design flow of a single-track access road = 100 veh/hour (capacity for single-track access road) x 1.28 pcu factor = 128 pcus/hour.

Table 4.6 Future Link Performance (Design Scenario)

Link No.	Section of Carriageway	Design Flow (pcus/hr)	Design Scenario Peak Hourly Flow		Peak Hourly Flows/ Design Flow Ratio (P/Df)	
			AM Peak	PM Peak	AM Peak	PM Peak
L1	Hai Wing Road (Section between Dao Yang Road and proposed development)	128 [(a)]	20	27	0.16	0.21
L2	Dao Yang Road (Section between Sha Tau Kok Road and Hai Wing Road)	128 [(a)]	63	55	0.49	0.43

Notes: (a) The design flow of a single-track access road = 100 veh/hour (capacity for single-track access road) x 1.28 pcu factor = 128 pcus/hour.

As depicted in **Table 4.5** and **Table 4.6**, the capacities of all key links are expected to perform satisfactorily during peak periods in both Reference and Design Scenarios.

5 Transport Provision

5.1 Vehicular Access Arrangement

The proposed approximately 7m wide vehicular access will be located at Tam Kon Shan Road, as depicted in **Figure 5.1**.

5.2 Internal Transport Provisions

Under the Hong Kong Planning Standards and Guidelines (HKPSG), there are no specific standards for car parking and loading/unloading provisions for open storage. Therefore, the internal transport facilities have been carefully designed based on the operational requirements of the proposed development to ensure seamless and efficient site operations.

The internal transport provisions include designated parking spaces, loading/unloading bays, and waiting spaces, which serve the following critical purposes:

- Facilitating efficient vehicle manoeuvring within the site,
- Preventing congestion and queuing on public roads, and
- Ensuring vehicles are parked and unloaded in an organized manner.

The proposed internal transport provision is summarized in **Table 5.1**.

Table 5.1 Internal Transport Provisions

Type	Dimension	Proposed Provision
Private Car Parking Space	2.5m (W) x 5.0m (L) x 2.4m (H)	5
Light Goods Vehicle Loading/Unloading Bay	3.5m (W) x 7.0m (L) x 3.6m (H)	8

The design includes 5 private car parking spaces and 8 light goods vehicle loading/unloading bays ensuring that vehicles can park within the site. This provision is critical in maintaining traffic flow along the surrounding public roads, as it eliminates the risk of vehicles queuing or waiting on Hai Wing Road or other access routes.

In addition, the internal layout has been optimized to accommodate the simultaneous presence of multiple vehicles, including those arriving, waiting, loading/unloading, and departing. This ensures that:

- Vehicles can manoeuvre efficiently without delays or bottlenecks.
- By confining all vehicle activities within the site, the design minimizes the likelihood of adverse impacts on public roads, including congestion or safety hazards.

Furthermore, a swept path analysis has been carried out to ensure that there is sufficient space for vehicles entering and leaving the application site. The typical manoeuvrability of vehicles is shown in **Figures SP-01 to SP-04 (Appendix B)**.

6 Summary and Conclusions

6.1 Summary

The Applicant intends to seek Town Planning Board ("TPB") approval for a Section 16 Planning Application No. (A/NE-LYT/841) for a Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, New Territories.

In the Approved Lung Yeuk Tau & Kwan Tei South Outline Zoning Plan No. S/NE-LYT/19 (referred to as the "OZP"), the Application Site is zoned as “Agriculture” and “Residential (Group C) uses, in which "Open Storage" use does not fall into either column 1 or column 2 of the Schedule of Uses. Consequently, obtaining planning permission from TPB is necessary for the proposed open storage in a temporary basis under Section 16 of the Town Planning Ordinance, based on the TPB Guideline PG-No. 13G.

To appraise the existing traffic conditions, classified turning movement count surveys have been carried out at the key junctions and key link of the surrounding road network on a normal weekday in June 2025 from 09:00 to 19:00. The morning (AM) and evening (PM) peak hours of the road network on weekday have been identified as 09:00 to 10:00 and 17:00 to 18:00 respectively.

Year 2028 is used as the design year of the traffic impact assessment. After the comparison between the historical data and the future planning data, for conservative purposes, an annual growth rate of +3.47% is adopted. This growth factor has been applied to the observed traffic flows in 2025 to determine the 2028 anticipated traffic flows.

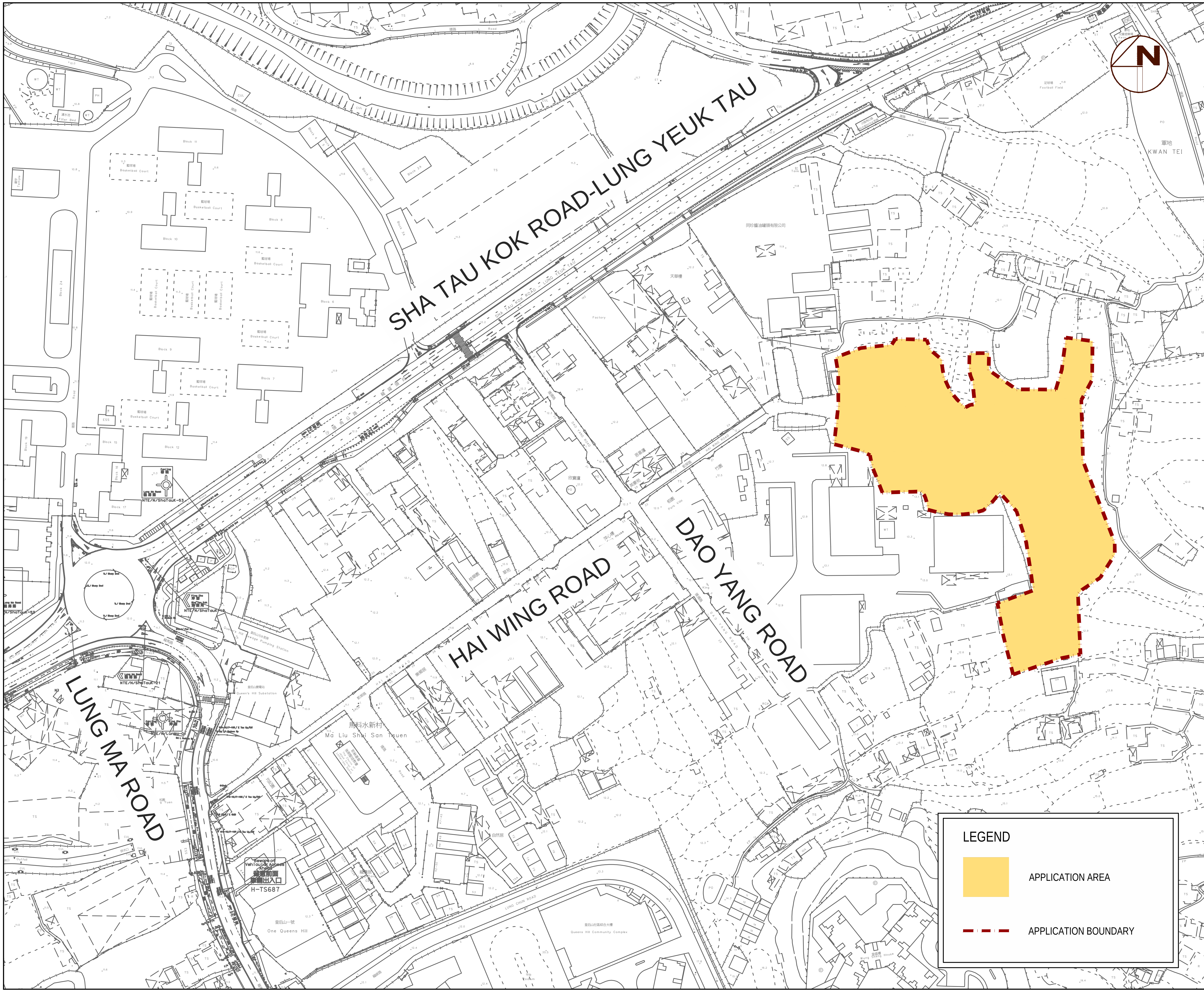
The capacities of all the key junctions and key link are expected to be performing satisfactorily during the peak periods for both the Reference and Design Scenarios.

A swept path analysis has been performed to ensure that there is sufficient manoeuvring space for vehicles entering and leaving the application site.

6.2 Conclusions

The findings of the traffic impact assessment confirm that the road network in the vicinity of the proposed development has sufficient capacity to accommodate the additional traffic generated, ensuring smooth traffic flow and no adverse impacts. The proposed development is therefore acceptable from a traffic perspective, with its design incorporating adequate measures to support efficient site operations while minimizing impacts on the surrounding road network.

Figures



Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

SITE LOCATION

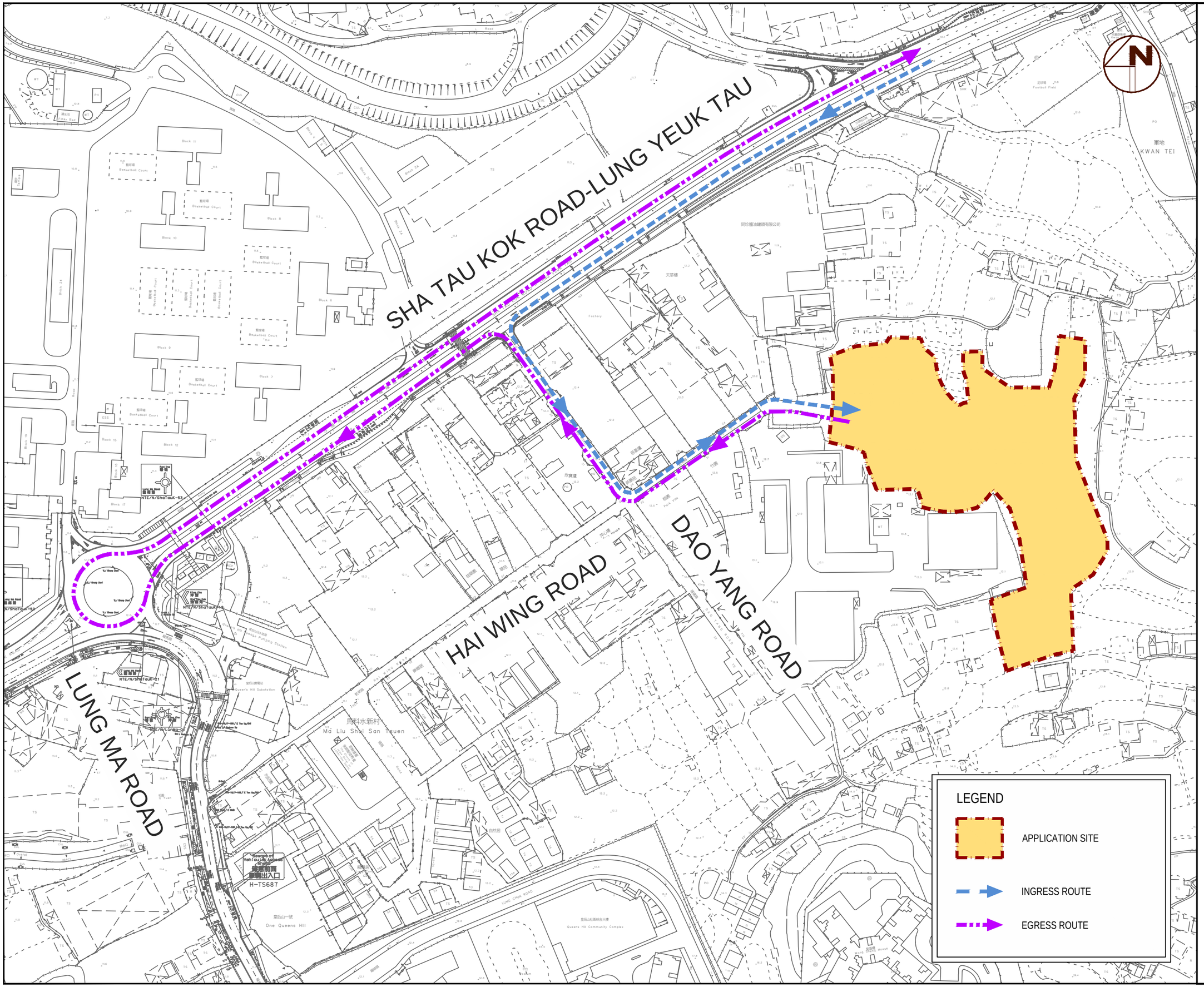
FIGURE 2.1

Scale : 1:2000 (A3)

Date : JUL 2025

Rev. : --

AXON CONSULTANCY
http://www.axonhk.com



Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

VEHICULAR INGRESS AND EGRESS ROUTE

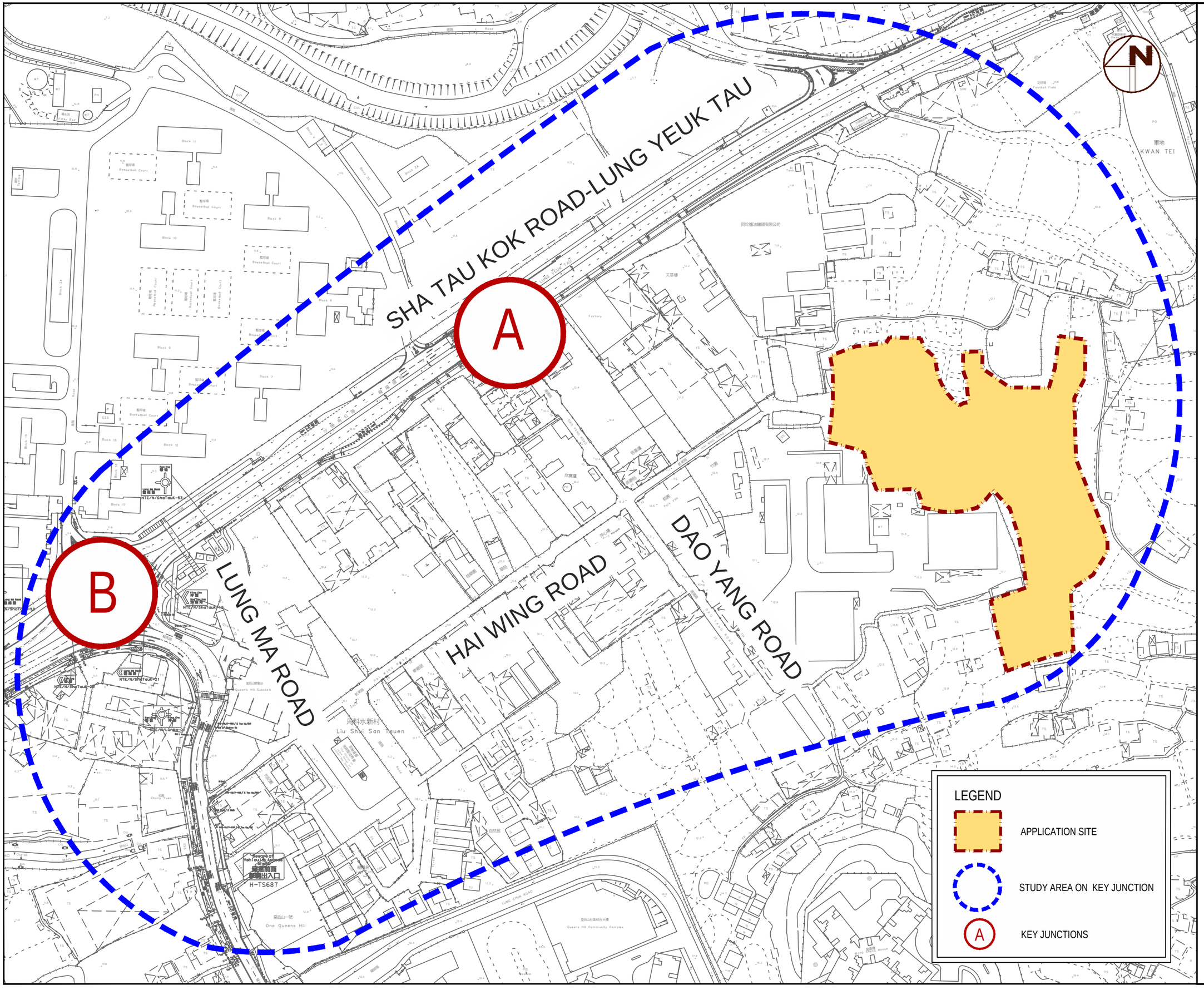
FIGURE 3.1

Scale : 1:10000 (A3)

Date : JUL 2025

Rev. : --

AXON CONSULTANCY
http://www.axonhk.com



Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

KEY JUNCTION

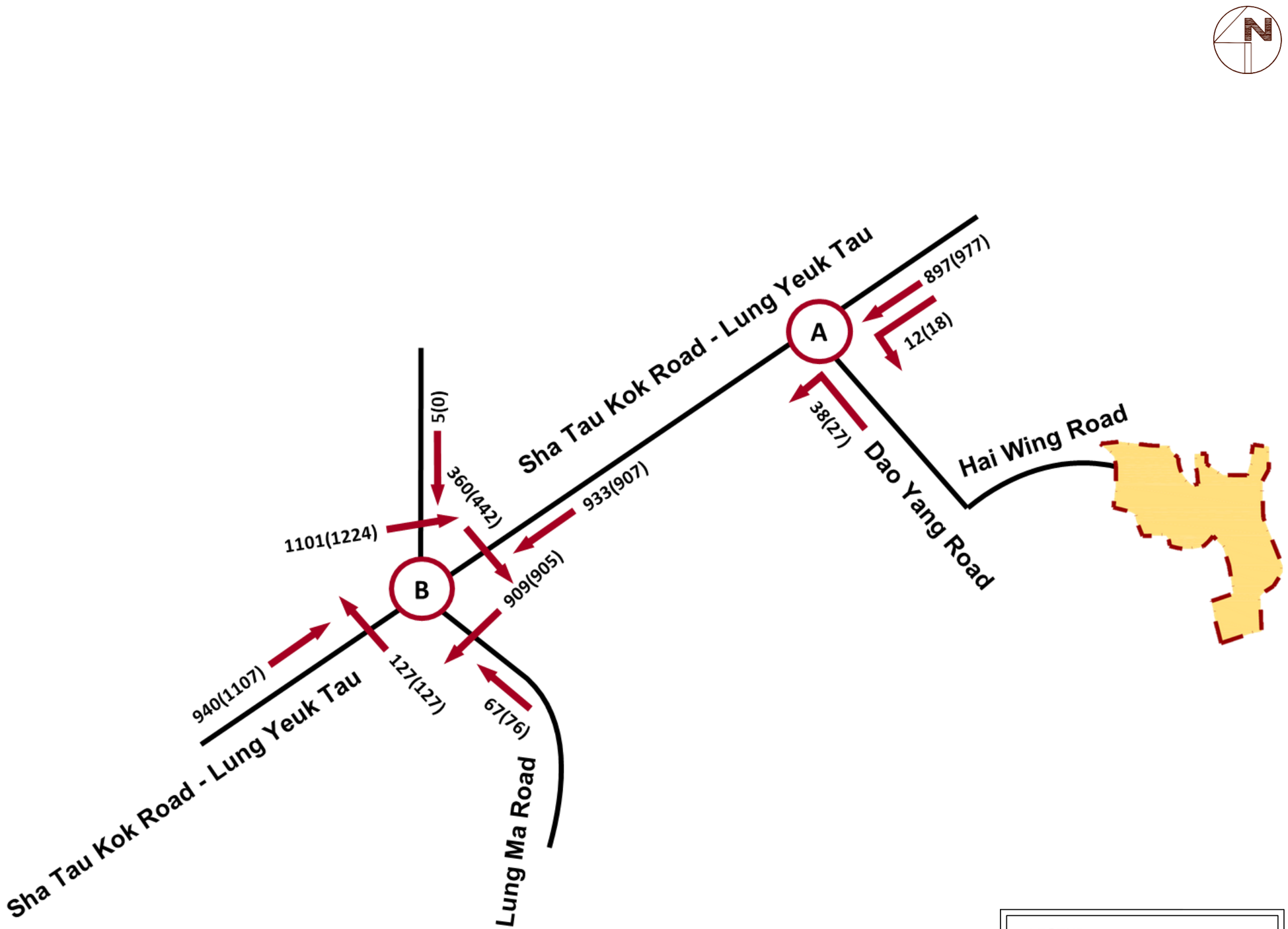
FIGURE 3.2

Scale : 1:2000 (A3)

Date : JUL 2025

Rev. : --

AXON CONSULTANCY
http://www.axonhk.com



LEGEND

APPLICATION SITE

100 (100) TRAFFIC FLOW IN PCU AT AM (PM) PEAK HOUR

Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

YEAR 2024 OBSERVED TRAFFIC FLOW

FIGURE 3.3

Scale : N.T.S

Date : JUL 2025

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

C:\USERS\USER\DESKTOP\31046\DATA\DRAWING\FIGURE 3.3.DWG

78K,78C,78P,78X,79,79K,79P
79X,277A,N78,679,979

78K,78C,78X,79,79K,79P
79X,277A,N78,679,979

52K

SHA TAU KOK ROAD-LUNG YEUK TAU

HAI WING ROAD

DAO YANG ROAD

LUNG MA ROAD

LEGEND

- APPLICATION SITE
- STUDY AREA ALONG THE 400 DESIRABLE WALKING DISTANCE
- FRANCHISED BUS
- PUBLIC LIGHT BUS

Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

PUBLIC TRANSPORT SERVICES

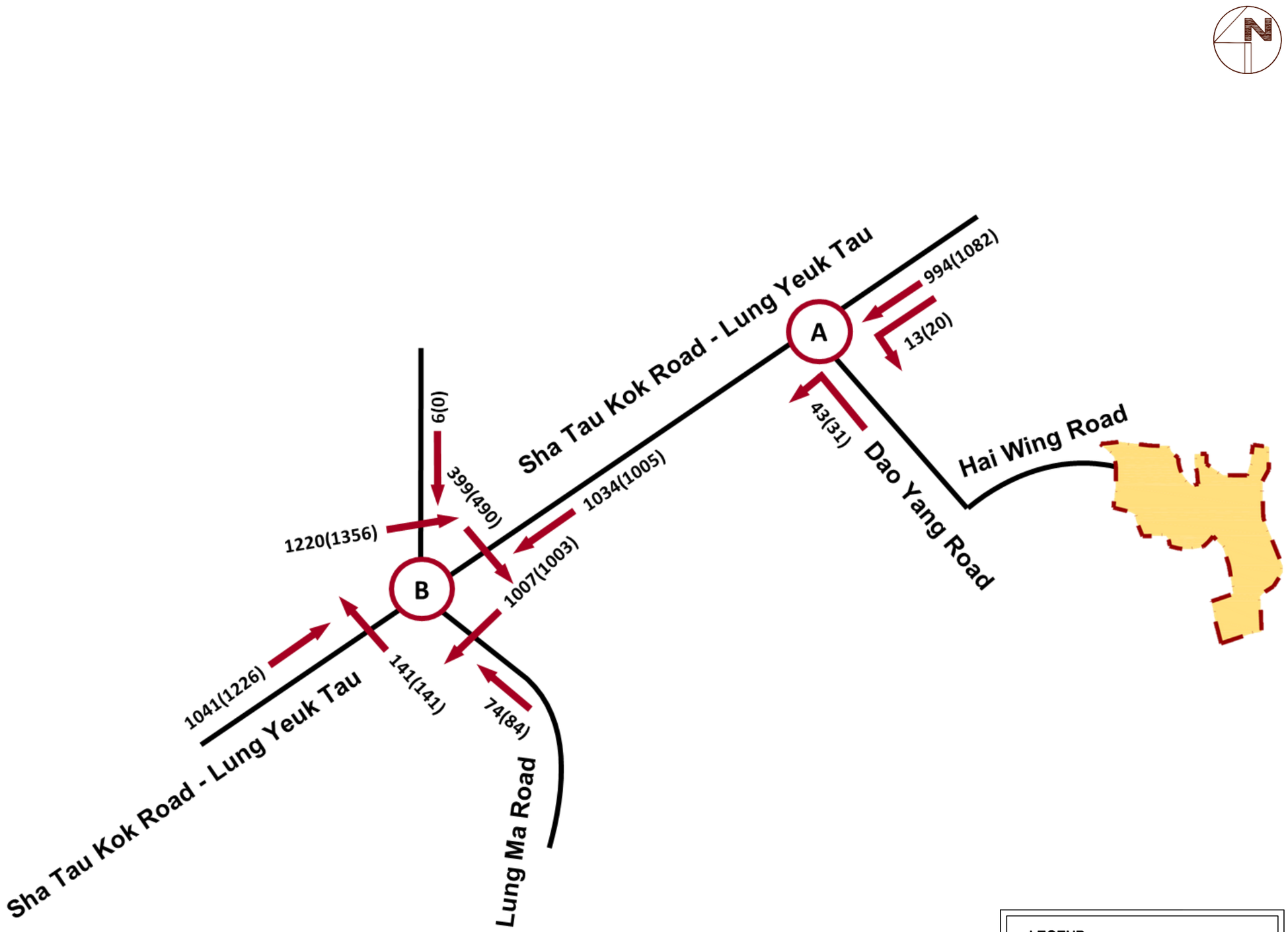
FIGURE 3.4

Scale : 1:2000 (A3)

Date : JUL 2025

Rev. : --

AXON CONSULTANCY
http://www.axonhk.com



LEGEND

APPLICATION SITE

100 (100) TRAFFIC FLOW IN PCU AT AM (PM) PEAK HOUR

Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

YEAR 2029 REFERENCE TRAFFIC FLOW

FIGURE 4.1

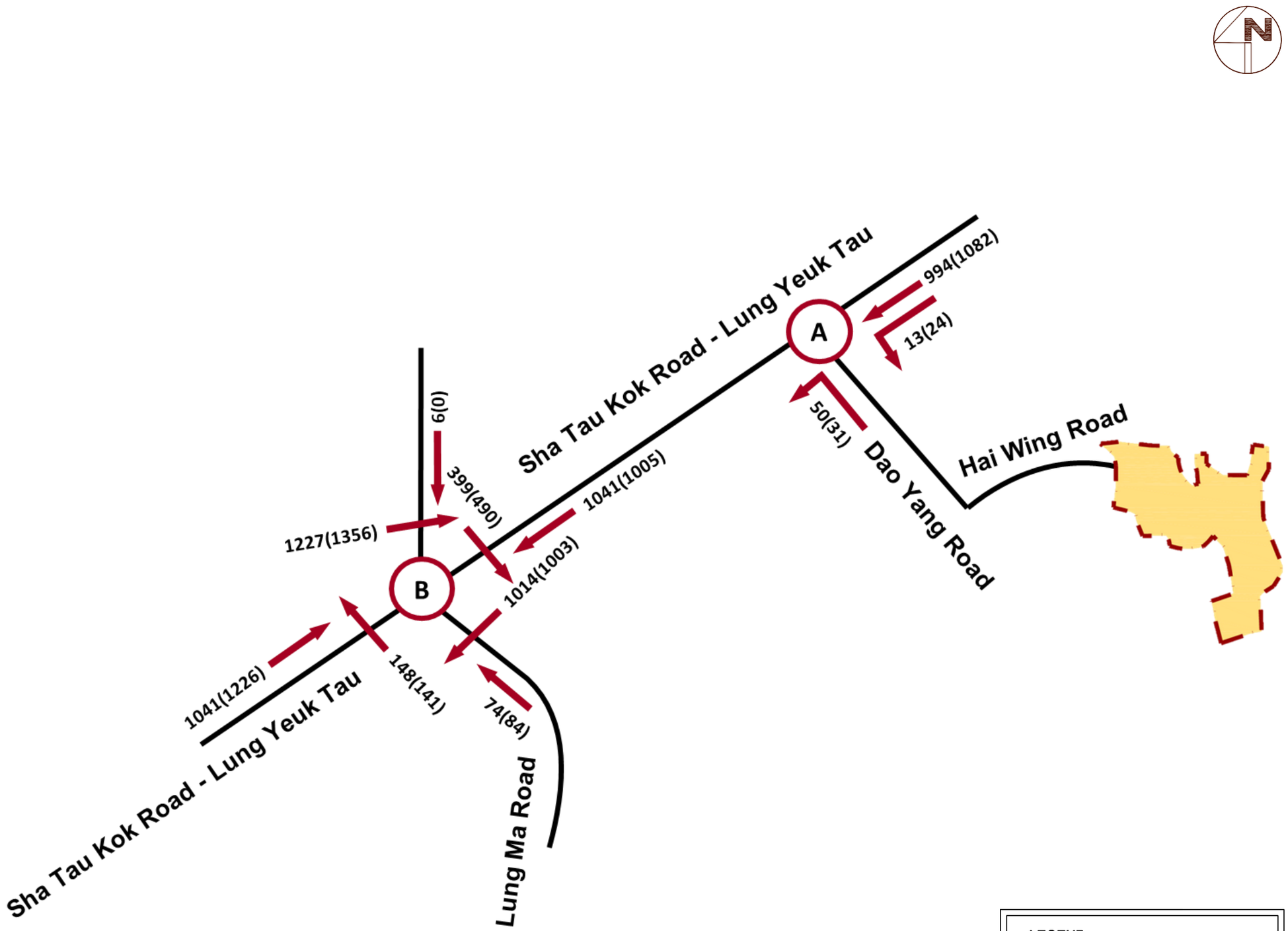
Scale : N.T.S

Date : JUL 2025

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

C:\USERS\USER\DESKTOP\31049\DATA\DRAWING\FIGURE 3.3.DWG



LEGEND

APPLICATION SITE

100 (100) TRAFFIC FLOW IN PCU AT AM (PM) PEAK HOUR

Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

YEAR 2029 DESIGN TRAFFIC FLOW

FIGURE 4.2

Scale : N.T.S

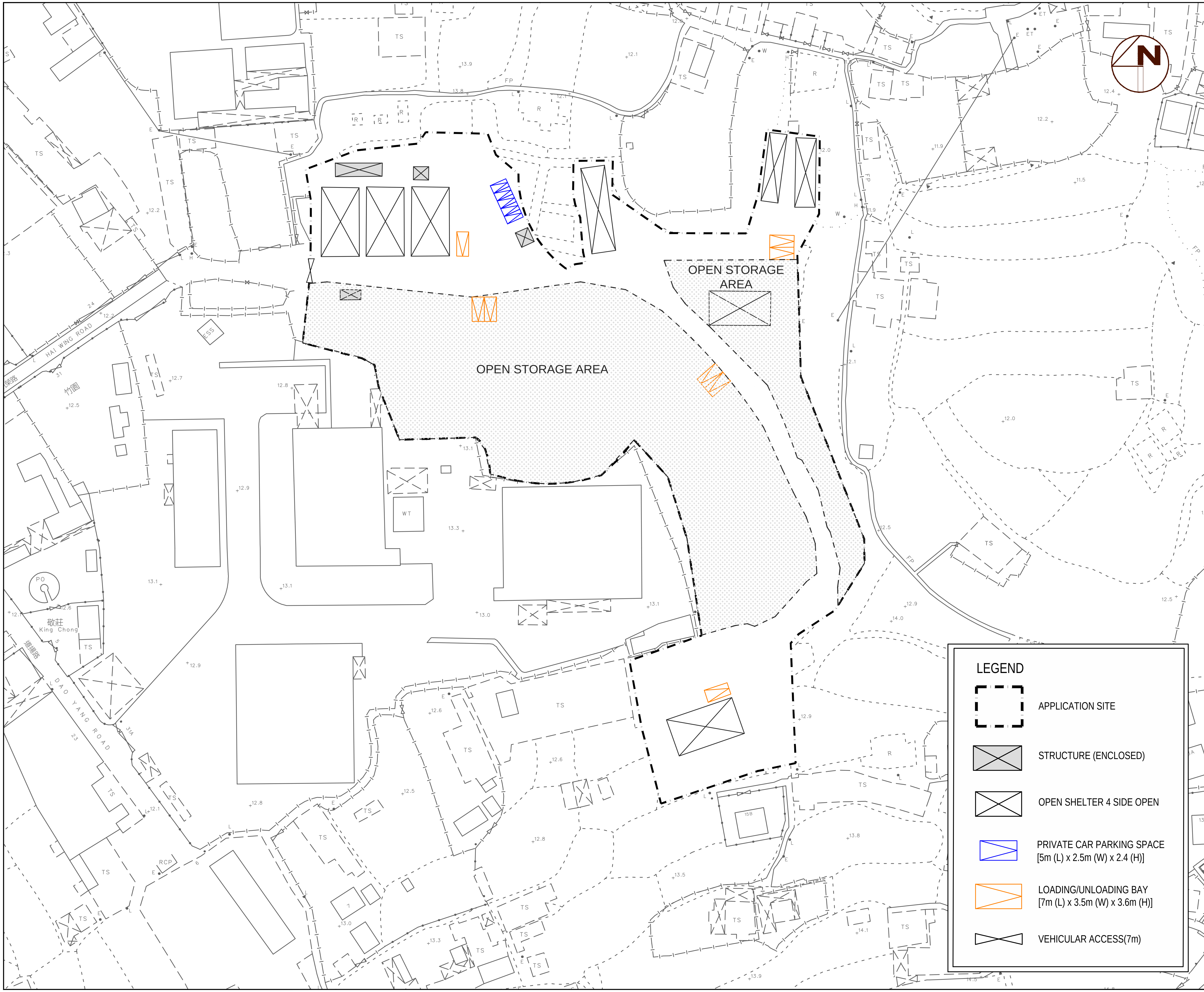
Date : JUL 2025

Rev. :

AXON CONSULTANCY
http://www.axonhk.com

C:\USERS\USER\DESKTOP\31049\DATA\DRAWING\FIGURE 3.3.DWG

Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.



INTERAL TRANSPORT PROVISION

FIGURE 5.1

Scale : 1:1000 (A3)

Date : JUL 2025

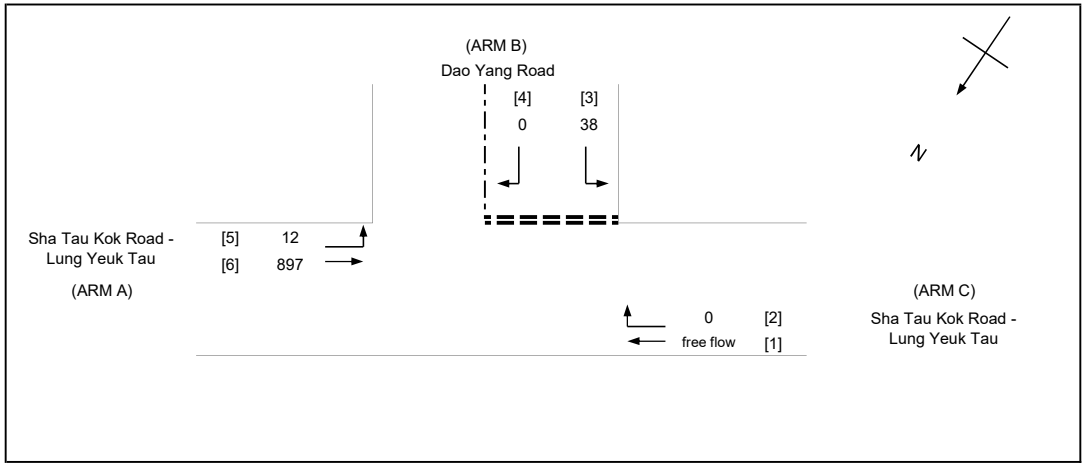
Rev. : --

AXON CONSULTANCY
http://www.axonhk.com

Appendix A

Junction Analysis

AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	22/7/2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	22/7/2025
Jn A - Sha Tau Kok Road - Lung Yeuk Tau / Dao Yang Road	2025 Observed Traffic Flow - AM Peak	Project No.: 31064	Reviewed By:	AW	22/7/2025



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	=	13.8	(metres)
W cr	=	0	(metres)
q a-b	=	12	(pcu/hr)
q a-c	=	897	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.1	(metres)
Vr c-b	=	27	(metres)
q c-a	=	free flow	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.1	(metres)
W b-c	=	3.1	(metres)
Vl b-a	=	17	(metres)
Vr b-a	=	17	(metres)
Vr b-c	=	27	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	38	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.792
E	=	0.869
F	=	0.783
Y	=	0.524
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

Q b-a	=	360	(pcu/hr)
Q b-c	=	498	(pcu/hr)
Q c-b	=	447	(pcu/hr)
Q b-ac	=	498	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	947	(pcu/hr)

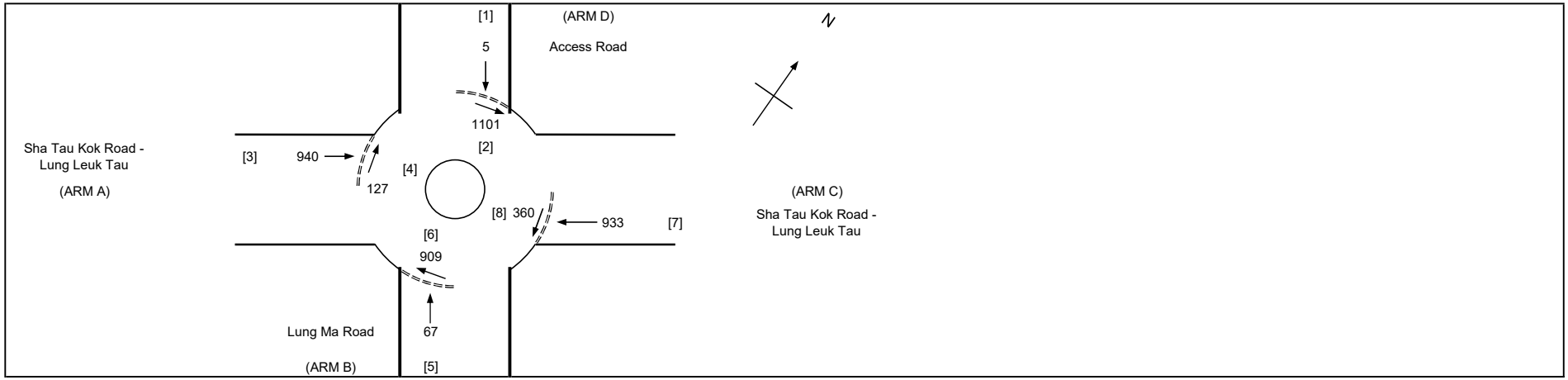
COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0763
DFC c-b	=	0.0000
DFC b-ac	=	0.0763
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.08

C:\Users\user\Desktop\31064\Data\Calculation\[31064 - Junction_OBS_AM.xlsx]A

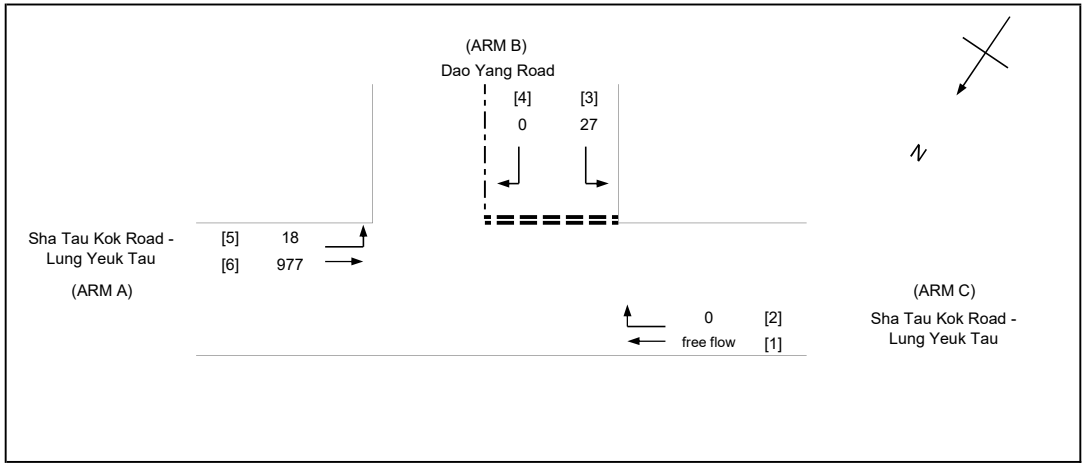
AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	Tuesday, 22 July 2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	Tuesday, 22 July 2025
Jn B - Sha Tau Kok Road - Lung Yeuk Tau / Lung Ma Road / Access Road	2025 Observed Traffic Flow - AM Peak	Project No.: 31064	Reviewed By:	AW	Tuesday, 22 July 2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**	**D**
V	=	Approach half width (m)		7.0	4.4	7.0	4.4
E	=	Entry width (m)		8.4	4.9	7.4	4.7
L	=	Effective length of flare (m)		19.5	3.2	7.0	2.2
R	=	Entry radius (m)		32.0	65.0	27.0	20.0
D	=	Inscribed circle diameter (m)		53.0	53.0	53.0	53.0
A	=	Entry angle (degree)		20.0	16.5	20.0	12.5
Q	=	Entry flow (pcu/h)		940	67	933	5
Qc	=	Circulating flow across entry (pcu/h)		127	909	360	1101
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L		0.11	0.25	0.09	0.22
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.05	1.08	1.05	1.06
X2	=	V + ((E-V)/(1+2S))		8.14	4.73	7.34	4.61
M	=	EXP((D-60)/10)		0.50	0.50	0.50	0.50
F	=	303*X2		2466	1434	2223	1396
Td	=	1+(0.5/(1+M))		1.33	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)		0.74	0.55	0.69	0.54
Qe	=	K(F-Fc*Qc)		2498	1014	2068	853
DFC	=	Design flow/Capacity = Q/Qe		0.38	0.07	0.45	0.01

TOTAL FLOW = 4442 (pcu/hr)
CRITICAL DFC = 0.45

AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	22/7/2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	22/7/2025
Jn A - Sha Tau Kok Road - Lung Yeuk Tau / Dao Yang Road	2025 Observed Traffic Flow - PM Peak	Project No.: 31064	Reviewed By:	AW	22/7/2025



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	=	13.8	(metres)
W cr	=	0	(metres)
q a-b	=	18	(pcu/hr)
q a-c	=	977	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.1	(metres)
Vr c-b	=	27	(metres)
q c-a	=	free flow	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.1	(metres)
W b-c	=	3.1	(metres)
Vl b-a	=	17	(metres)
Vr b-a	=	17	(metres)
Vr b-c	=	27	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	27	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.792
E	=	0.869
F	=	0.783
Y	=	0.524
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

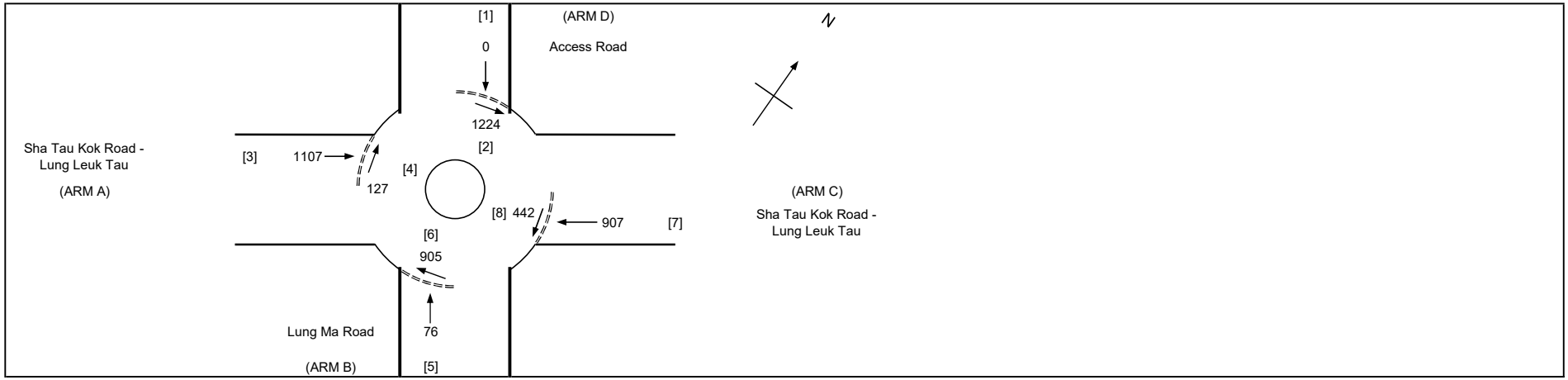
Q b-a	=	348	(pcu/hr)
Q b-c	=	484	(pcu/hr)
Q c-b	=	435	(pcu/hr)
Q b-ac	=	484	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	1022	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0558
DFC c-b	=	0.0000
DFC b-ac	=	0.0558
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.06

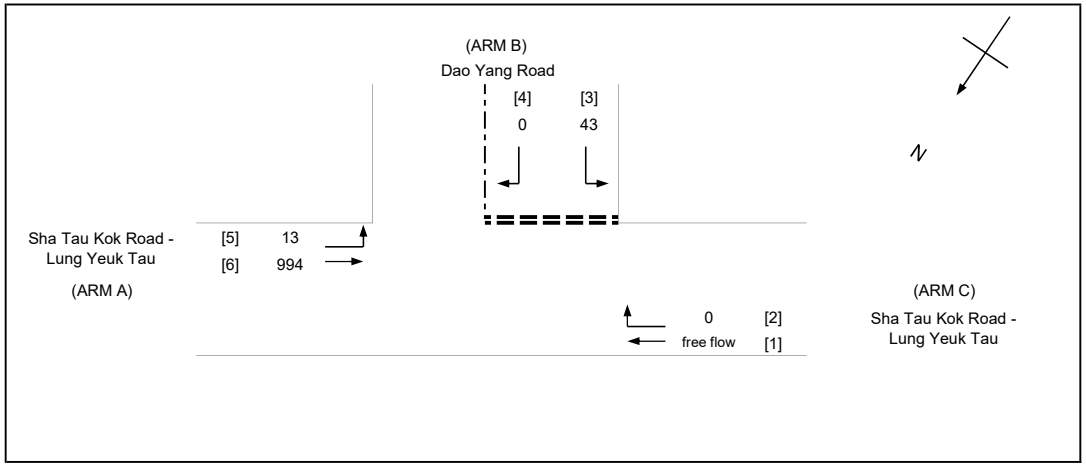
AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	Tuesday, 22 July 2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	Tuesday, 22 July 2025
Jn B - Sha Tau Kok Road - Lung Yeuk Tau / Lung Ma Road / Access Road	2025 Observed Traffic Flow - PM Peak	Project No.: 31064	Reviewed By:	AW	Tuesday, 22 July 2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**	**D**
V	=	Approach half width (m)		7.0	4.4	7.0	4.4
E	=	Entry width (m)		8.4	4.9	7.4	4.7
L	=	Effective length of flare (m)		19.5	3.2	7.0	2.2
R	=	Entry radius (m)		32.0	65.0	27.0	20.0
D	=	Inscribed circle diameter (m)		53.0	53.0	53.0	53.0
A	=	Entry angle (degree)		20.0	16.5	20.0	12.5
Q	=	Entry flow (pcu/h)		1107	76	907	0
Qc	=	Circulating flow across entry (pcu/h)		127	905	442	1224
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L		0.11	0.25	0.09	0.22
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.05	1.08	1.05	1.06
X2	=	V + ((E-V)/(1+2S))		8.14	4.73	7.34	4.61
M	=	EXP((D-60)/10)		0.50	0.50	0.50	0.50
F	=	303*X2		2466	1434	2223	1396
Td	=	1+(0.5/(1+M))		1.33	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)		0.74	0.55	0.69	0.54
Qe	=	K(F-Fc*Qc)		2498	1017	2009	782
DFC	=	Design flow/Capacity = Q/Qe		0.44	0.07	0.45	0.00

TOTAL FLOW = 4788 (pcu/hr)
CRITICAL DFC = 0.45

AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	22/7/2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	22/7/2025
Jn A - Sha Tau Kok Road - Lung Yeuk Tau / Dao Yang Road	2028 Reference Traffic Flow - AM Peak	Project No.: 31064	Reviewed By:	AW	22/7/2025



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	=	13.8	(metres)
W cr	=	0	(metres)
q a-b	=	13	(pcu/hr)
q a-c	=	994	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.1	(metres)
Vr c-b	=	27	(metres)
q c-a	=	free flow	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.1	(metres)
W b-c	=	3.1	(metres)
Vl b-a	=	17	(metres)
Vr b-a	=	17	(metres)
Vr b-c	=	27	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	43	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.792
E	=	0.869
F	=	0.783
Y	=	0.524
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

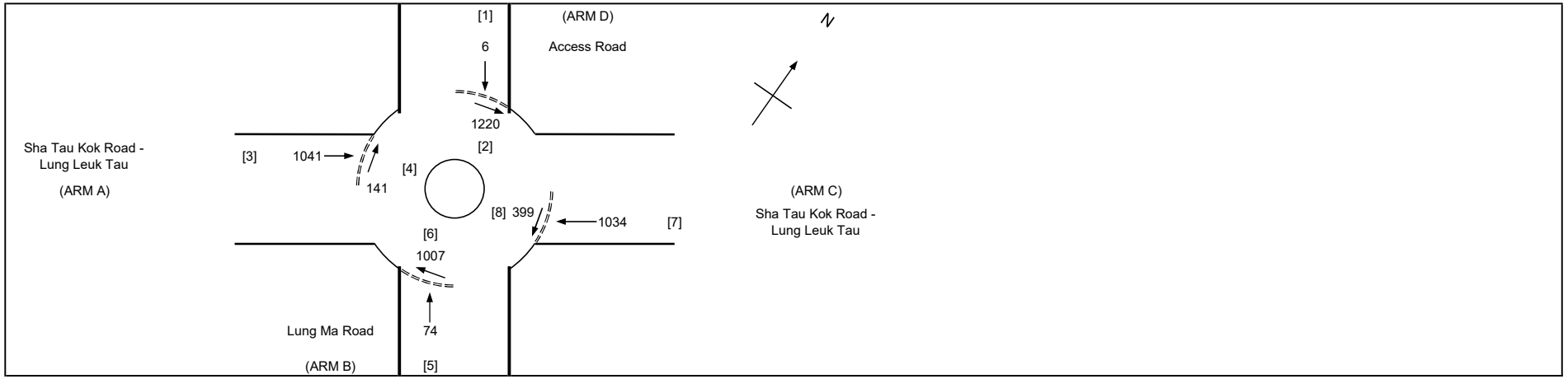
Q b-a	=	346	(pcu/hr)
Q b-c	=	482	(pcu/hr)
Q c-b	=	433	(pcu/hr)
Q b-ac	=	482	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	1050	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0892
DFC c-b	=	0.0000
DFC b-ac	=	0.0892
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.09

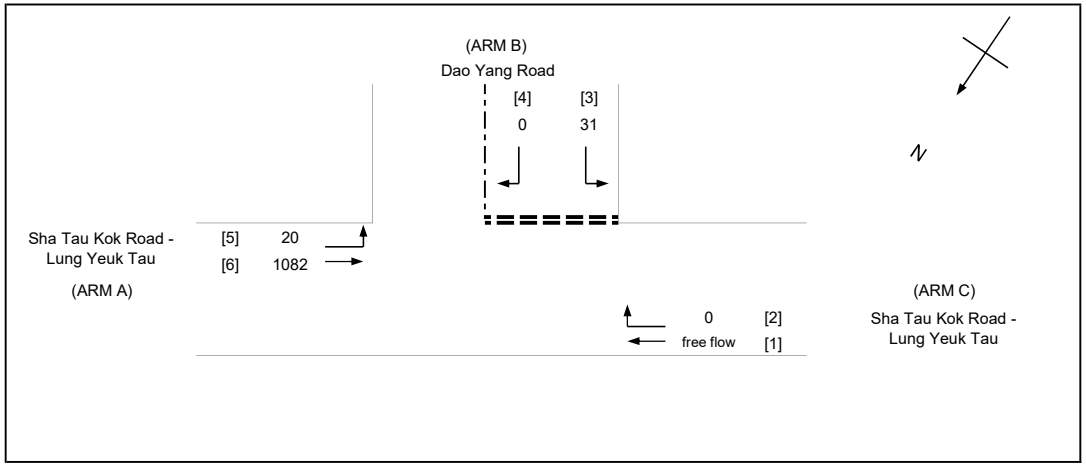
AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	Tuesday, 22 July 2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	Tuesday, 22 July 2025
Jn B - Sha Tau Kok Road - Lung Yeuk Tau / Lung Ma Road / Access Road	2028 Reference Traffic Flow - AM Peak	Project No.: 31064	Reviewed By:	AW	Tuesday, 22 July 2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**	**D**
V	=	Approach half width (m)		7.0	4.4	7.0	4.4
E	=	Entry width (m)		8.4	4.9	7.4	4.7
L	=	Effective length of flare (m)		19.5	3.2	7.0	2.2
R	=	Entry radius (m)		32.0	65.0	27.0	20.0
D	=	Inscribed circle diameter (m)		53.0	53.0	53.0	53.0
A	=	Entry angle (degree)		20.0	16.5	20.0	12.5
Q	=	Entry flow (pcu/h)		1041	74	1034	6
Qc	=	Circulating flow across entry (pcu/h)		141	1007	399	1220
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L		0.11	0.25	0.09	0.22
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.05	1.08	1.05	1.06
X2	=	V + ((E-V)/(1+2S))		8.14	4.73	7.34	4.61
M	=	EXP((D-60)/10)		0.50	0.50	0.50	0.50
F	=	303*X2		2466	1434	2223	1396
Td	=	1+(0.5/(1+M))		1.33	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)		0.74	0.55	0.69	0.54
Qe	=	K(F-Fc*Qc)		2487	956	2040	785
DFC	=	Design flow/Capacity = Q/Qe		0.42	0.08	0.51	0.01

TOTAL FLOW = 4922 (pcu/hr)
CRITICAL DFC = 0.51

AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	22/7/2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	22/7/2025
Jn A - Sha Tau Kok Road - Lung Yeuk Tau / Dao Yang Road	2028 Reference Traffic Flow - PM Peak	Project No.: 31064	Reviewed By:	AW	22/7/2025



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	=	13.8	(metres)
W cr	=	0	(metres)
q a-b	=	20	(pcu/hr)
q a-c	=	1082	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.1	(metres)
Vr c-b	=	27	(metres)
q c-a	=	free flow	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.1	(metres)
W b-c	=	3.1	(metres)
Vl b-a	=	17	(metres)
Vr b-a	=	17	(metres)
Vr b-c	=	27	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	31	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.792
E	=	0.869
F	=	0.783
Y	=	0.524
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

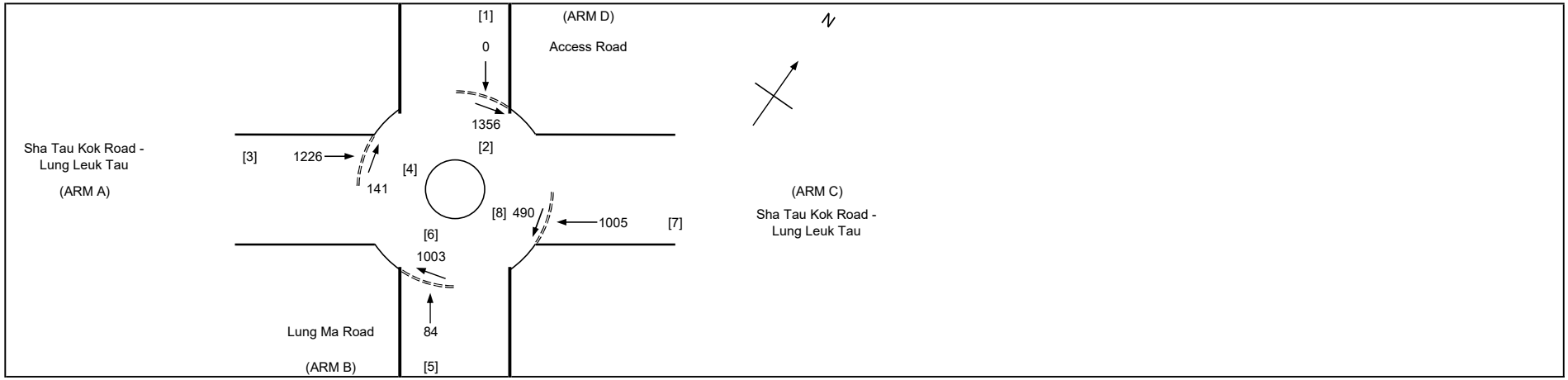
Q b-a	=	332	(pcu/hr)
Q b-c	=	467	(pcu/hr)
Q c-b	=	419	(pcu/hr)
Q b-ac	=	467	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	1133	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0664
DFC c-b	=	0.0000
DFC b-ac	=	0.0664
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.07

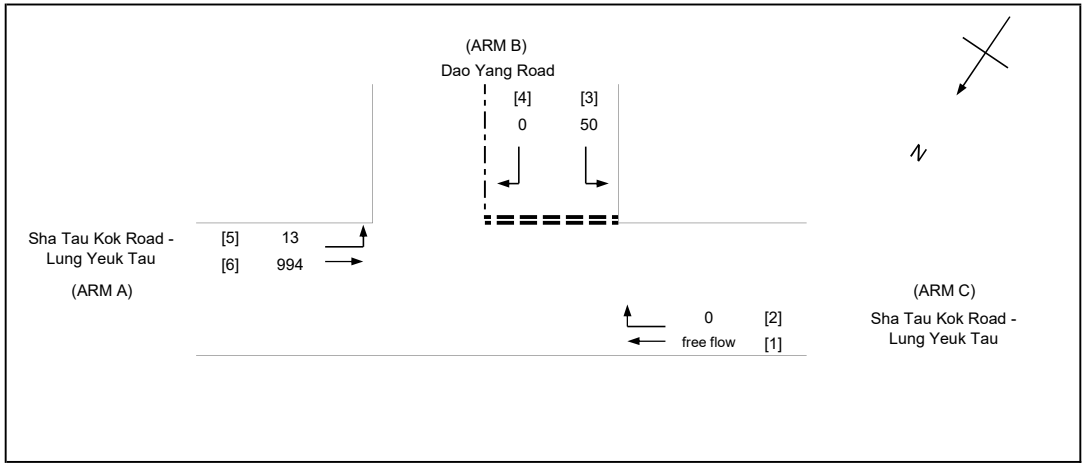
AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	Tuesday, 22 July 2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	Tuesday, 22 July 2025
Jn B - Sha Tau Kok Road - Lung Yeuk Tau / Lung Ma Road / Access Road	2028 Reference Traffic Flow - PM Peak	Project No.: 31064	Reviewed By:	AW	Tuesday, 22 July 2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**	**D**
V	=	Approach half width (m)		7.0	4.4	7.0	4.4
E	=	Entry width (m)		8.4	4.9	7.4	4.7
L	=	Effective length of flare (m)		19.5	3.2	7.0	2.2
R	=	Entry radius (m)		32.0	65.0	27.0	20.0
D	=	Inscribed circle diameter (m)		53.0	53.0	53.0	53.0
A	=	Entry angle (degree)		20.0	16.5	20.0	12.5
Q	=	Entry flow (pcu/h)		1226	84	1005	0
Qc	=	Circulating flow across entry (pcu/h)		141	1003	490	1356
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L		0.11	0.25	0.09	0.22
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.05	1.08	1.05	1.06
X2	=	V + ((E-V)/(1+2S))		8.14	4.73	7.34	4.61
M	=	EXP((D-60)/10)		0.50	0.50	0.50	0.50
F	=	303*X2		2466	1434	2223	1396
Td	=	1+(0.5/(1+M))		1.33	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)		0.74	0.55	0.69	0.54
Qe	=	K(F-Fc*Qc)		2487	959	1974	707
DFC	=	Design flow/Capacity = Q/Qe		0.49	0.09	0.51	0.00

TOTAL FLOW = 5305 (pcu/hr)
CRITICAL DFC = 0.51

AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	22/7/2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	22/7/2025
Jn A - Sha Tau Kok Road - Lung Yeuk Tau / Dao Yang Road	2028 Design Traffic Flow - AM Peak	Project No.: 31064	Reviewed By:	AW	22/7/2025



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	=	13.8	(metres)
W cr	=	0	(metres)
q a-b	=	13	(pcu/hr)
q a-c	=	994	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.1	(metres)
Vr c-b	=	27	(metres)
q c-a	=	free flow	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.1	(metres)
W b-c	=	3.1	(metres)
Vl b-a	=	17	(metres)
Vr b-a	=	17	(metres)
Vr b-c	=	27	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	50	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.792
E	=	0.869
F	=	0.783
Y	=	0.524
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

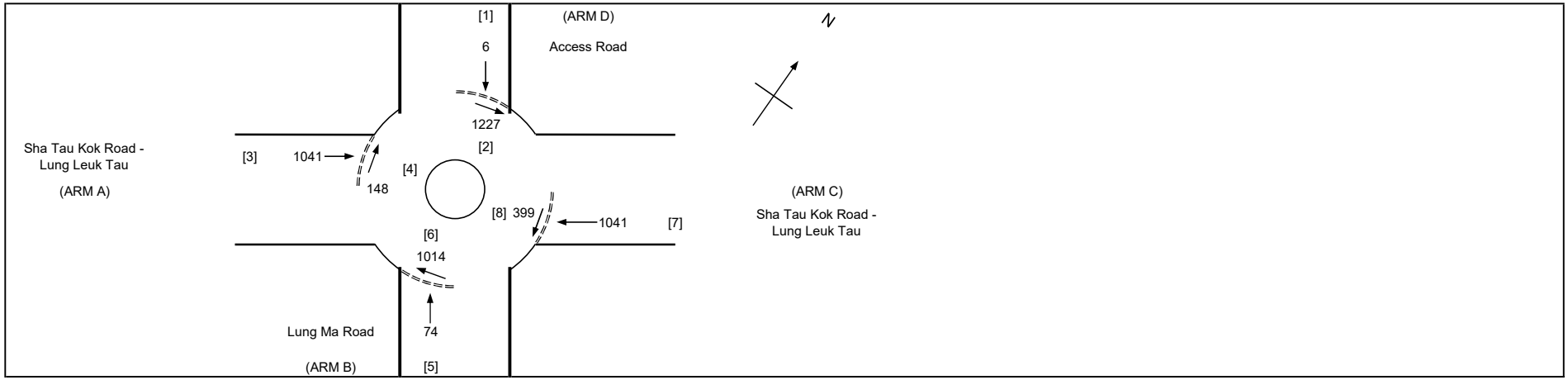
Q b-a	=	346	(pcu/hr)
Q b-c	=	482	(pcu/hr)
Q c-b	=	433	(pcu/hr)
Q b-ac	=	482	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	1057	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1037
DFC c-b	=	0.0000
DFC b-ac	=	0.1037
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.10

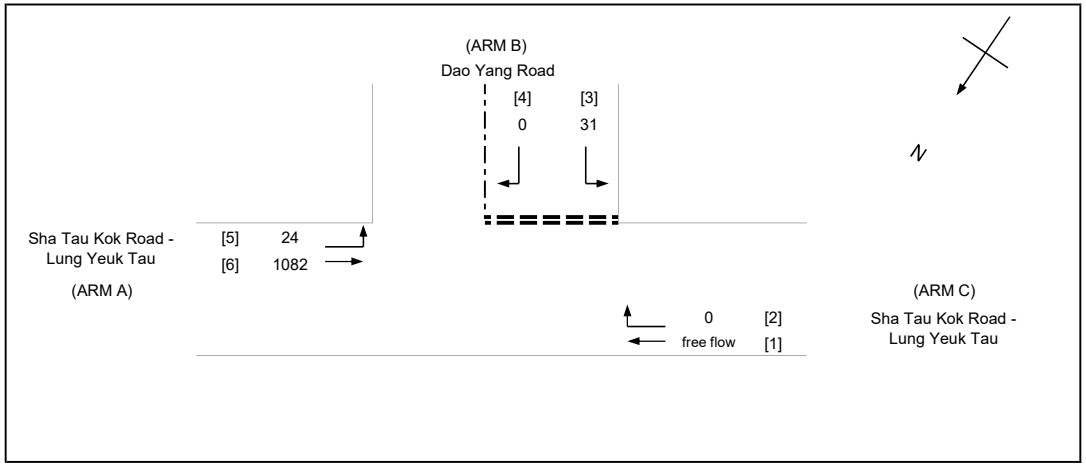
AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	Tuesday, 22 July 2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	Tuesday, 22 July 2025
Jn B - Sha Tau Kok Road - Lung Yeuk Tau / Lung Ma Road / Access Road	2028 Design Traffic Flow - AM Peak	Project No.: 31064	Reviewed By:	AW	Tuesday, 22 July 2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**	**D**
V	=	Approach half width (m)		7.0	4.4	7.0	4.4
E	=	Entry width (m)		8.4	4.9	7.4	4.7
L	=	Effective length of flare (m)		19.5	3.2	7.0	2.2
R	=	Entry radius (m)		32.0	65.0	27.0	20.0
D	=	Inscribed circle diameter (m)		53.0	53.0	53.0	53.0
A	=	Entry angle (degree)		20.0	16.5	20.0	12.5
Q	=	Entry flow (pcu/h)		1041	74	1041	6
Qc	=	Circulating flow across entry (pcu/h)		148	1014	399	1227
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L		0.11	0.25	0.09	0.22
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.05	1.08	1.05	1.06
X2	=	V + ((E-V)/(1+2S))		8.14	4.73	7.34	4.61
M	=	EXP((D-60)/10)		0.50	0.50	0.50	0.50
F	=	303*X2		2466	1434	2223	1396
Td	=	1+(0.5/(1+M))		1.33	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)		0.74	0.55	0.69	0.54
Qe	=	K(F-Fc*Qc)		2482	952	2040	781
DFC	=	Design flow/Capacity = Q/Qe		0.42	0.08	0.51	0.01

TOTAL FLOW = 4950 (pcu/hr)
CRITICAL DFC = 0.51

AXON CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	22/7/2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	22/7/2025
Jn A - Sha Tau Kok Road - Lung Yeuk Tau / Dao Yang Road	2028 Design Traffic Flow - PM Peak	Project No.: 31064	Reviewed By:	AW	22/7/2025



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	=	13.8	(metres)
W cr	=	0	(metres)
q a-b	=	24	(pcu/hr)
q a-c	=	1082	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.1	(metres)
Vr c-b	=	27	(metres)
q c-a	=	free flow	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.1	(metres)
W b-c	=	3.1	(metres)
Vl b-a	=	17	(metres)
Vr b-a	=	17	(metres)
Vr b-c	=	27	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	31	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.792
E	=	0.869
F	=	0.783
Y	=	0.524
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

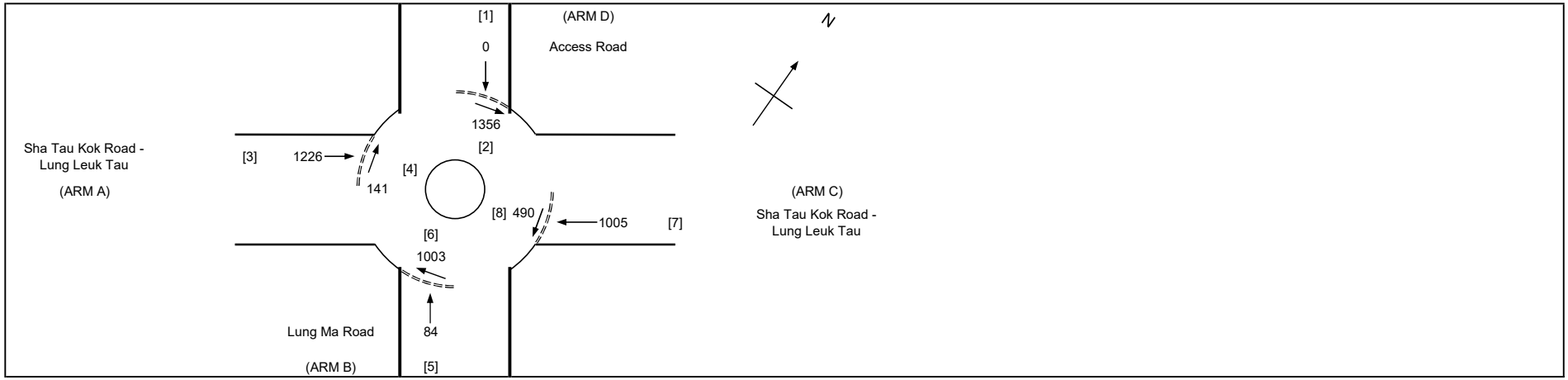
Q b-a	=	332	(pcu/hr)
Q b-c	=	466	(pcu/hr)
Q c-b	=	418	(pcu/hr)
Q b-ac	=	466	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	1137	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0665
DFC c-b	=	0.0000
DFC b-ac	=	0.0665
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.07

AXON CONSULTANCY LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots			Prepared By:	JK	Tuesday, 22 July 2025
in D.D. 83, Lung Yeuk Tau, N.T			Checked By:	SY	Tuesday, 22 July 2025
Jn B - Sha Tau Kok Road - Lung Yeuk Tau / Lung Ma Road / Access Road	2028 Design Traffic Flow - PM Peak	Project No.: 31064	Reviewed By:	AW	Tuesday, 22 July 2025

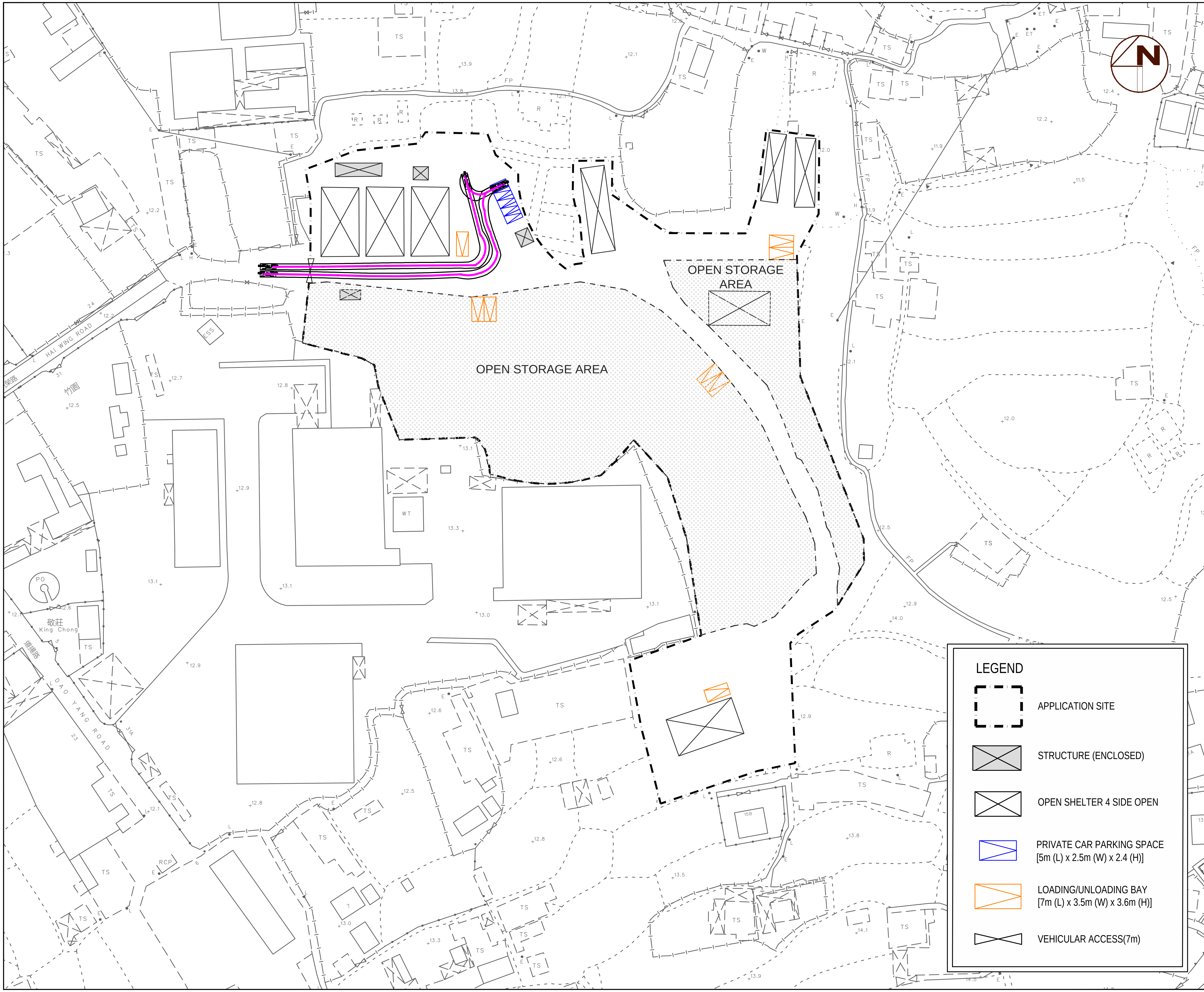


GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**	**D**
V	=	Approach half width (m)		7.0	4.4	7.0	4.4
E	=	Entry width (m)		8.4	4.9	7.4	4.7
L	=	Effective length of flare (m)		19.5	3.2	7.0	2.2
R	=	Entry radius (m)		32.0	65.0	27.0	20.0
D	=	Inscribed circle diameter (m)		53.0	53.0	53.0	53.0
A	=	Entry angle (degree)		20.0	16.5	20.0	12.5
Q	=	Entry flow (pcu/h)		1226	84	1005	0
Qc	=	Circulating flow across entry (pcu/h)		141	1003	490	1356
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L		0.11	0.25	0.09	0.22
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.05	1.08	1.05	1.06
X2	=	V + ((E-V)/(1+2S))		8.14	4.73	7.34	4.61
M	=	EXP((D-60)/10)		0.50	0.50	0.50	0.50
F	=	303*X2		2466	1434	2223	1396
Td	=	1+(0.5/(1+M))		1.33	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)		0.74	0.55	0.69	0.54
Qe	=	K(F-Fc*Qc)		2487	959	1974	707
DFC	=	Design flow/Capacity = Q/Qe		0.49	0.09	0.51	0.00

TOTAL FLOW = 5305 (pcu/hr)
CRITICAL DFC = 0.51

Appendix B

Swept Path Analysis



Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

SWEPT PATH ANALYSIS FOR 5m PRIVATE CAR

FIGURE SP-01

Scale : 1:1000 (A3)

Date : JUL 2025

Rev. : --

AXON CONSULTANCY
http://www.axonhk.com

Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

SWEPT PATH ANALYSIS FOR 5m PRIVATE CAR

FIGURE SP-02

OPEN STORAGE AREA

OPEN STORAGE AREA

HAI WING ROAD

DAO YANG ROAD

敬莊 King Chong

LEGEND

- APPLICATION SITE
- STRUCTURE (ENCLOSED)
- OPEN SHELTER 4 SIDE OPEN
- PRIVATE CAR PARKING SPACE [5m (L) x 2.5m (W) x 2.4 (H)]
- LOADING/UNLOADING BAY [7m (L) x 3.5m (W) x 3.6m (H)]
- VEHICULAR ACCESS(7m)

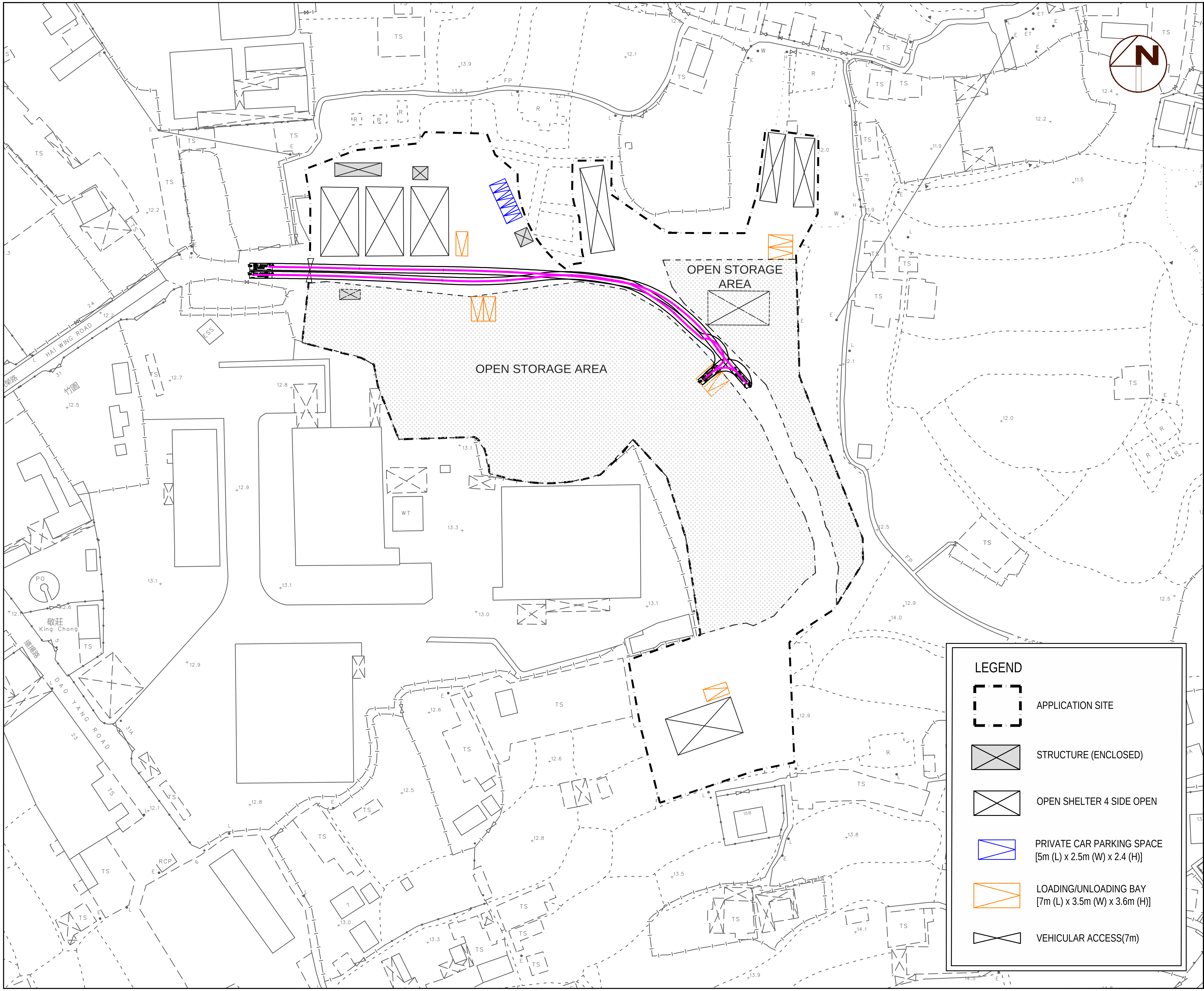
Scale : 1:1000 (A3)

Date : JUL 2025

Rev. : --

AXON CONSULTANCY
http://www.axonhk.com

Z:\DWG\A1\13106A_TIA\13106A_FIGURE S-1.DWG



Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

SWEPT PATH ANALYSIS FOR 7m LIGHT GOODS VEHICLE

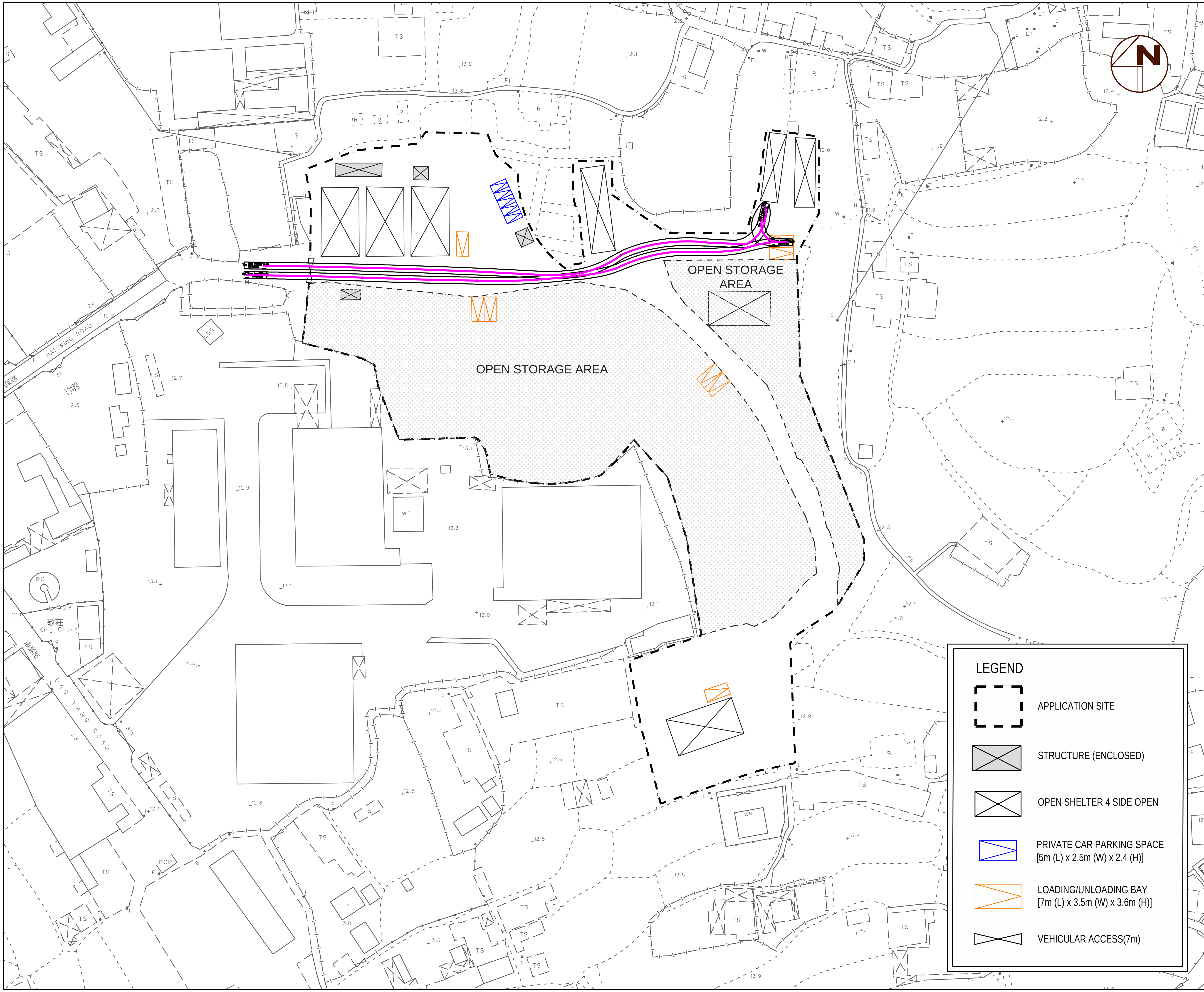
FIGURE SP-03

Scale : 1:1000 (A3)

Date : JUL 2025

Rev. : --

AXON CONSULTANCY
http://www.axonhk.com



Traffic Impact Assessment for Proposed Temporary Open Storage of Construction Materials and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 83, Lung Yeuk Tau, N.T.

SWEPT PATH ANALYSIS FOR 7m LIGHT GOODS VEHICLE

FIGURE SP-04

Scale : 1:1000 (A3)

Date : JUL 2025

Rev. : --

AXON CONSULTANCY
http://www.axonhk.com