DeSPACE (International) Limited

Date: 26th January 2026

Pages: 1 + Attachments

BY EMAIL

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road, North Point, Hong Kong

Dear Sir/Madam,

SECTION 16 APPLICATION
TOWN PLANNING ORDINANCE (CHAPTER 131)

PROPOSED SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) IN "VILLAGE TYPE DEVELOPMENT" ZONE ON APPROVED NAM SANG WAI OUTLINE ZONING PLAN NO. S/YL-NSW/10 AT LOTS 3670 RP (PART), 3671 RP (PART), 3672 RP (PART) AND 3673 RP (PART) IN D.D.104, NAM SANG WAI, YUEN LONG

Town Planning Application No. A/YL-NSW/349 - Submission of Further Information (6)

References are made to the emails dated 4th December 2025, 11th December 2025, 19th January 2026 and 23rd January 2026 from the Planning Department in relation to technical comments from TD and EPD.

In order to address the comments, please find attached the copy of the response-to-comment (R to C) table with the Revised Traffic Impact Assessment (**Appendix 1**), Revised Environmental Assessment (**Appendix 2**) and Revised Sewerage Impact Assessment (**Appendix 3**).

Should you have any queries with this submission, please feel free to contact Mr. Jeffrey Kwok and Mr. Kin Leung at [redacted] or the undersigned at [redacted].

Yours faithfully,
FOR AND ON BEHALF OF
DeSPACE (INTERNATIONAL) LIMITED

pp.

Greg Lam

DeSPACE (International) Limited 構建(國際)有限公司

[redacted]

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Lots 3670 RP (Part), 3671 RP (Part), 3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104, Nam Sang Wai, Yuen Long (TPB ref.: A/YL-NSW/349)

Response-to-Comment Table

Departmental Comments		Responses
Email dated 4th December 2025: Comments from TD		
1.	Please confirm the 24-hour breakdown of traffic generation of the proposed RCHE has already taken into account of the RCHE operational need, i.e. frequency of Rehabus. Please append the table of 24-hour breakdown of traffic generation into the Report.	The operational need of the Proposed RCHE has been taken into account in 24-hour breakdown of traffic generation which can be found in Appendix 3 of the revised Traffic Impact Assessment (**Appendix 1**).
2.	Given the congested area at the site entrance, the management staff should be on-site at all time to manage the traffic.	Noted.
3.	Re. RtC Item 6: It appears that your checking of visibility splay has not taken into account of the existing planter. Please revisit the checking and demonstrate sufficient sightline could be maintained at all time since the commissioning of RCHE.	In order to ensure the adequate sightline for vehicles and pedestrian, the amendment of existing planter is needed to ensure no obstructions taller than 1.05m will be erected within the visibility splay at the run-in/out.
4.	Table 4.3: planned development should be endorsed by PlanD.	According to the advice from Planning Department in Annex 1, Table 4.3 in the revised Traffic Impact Assessment is updated.
5.	Please advice the taxi/PC pick-up/drop-off location in the subject site and propose necessary traffic management measures to ensure that it would not cause any incoming vehicles queuing back on public road.	In order to avoid queuing back to Kam Pok Road East, the management staff will be deployed to guide the taxi / private car to conduct pick-up/drop-off activities in the basement floor.
Emails dated 11th December 2025, 19th January 2026 and 23rd January 2026: Comments from EPD		
1.	**Noise** Please supplement in the report the reason(s) for the proposed demolition of the existing noise barrier.	See revised Environmental Assessment (**Appendix 2**). The discussion is provided in Section 3.4.7.
2.	Please note the following comments when preparing NIA based on the detailed building layout at a later stage: a. The separated cells of the dormitory should not be divided by full-height partitions in order to maintain the noise reduction performance of the acoustic windows.	Noted.

	b. Please provide TD's endorsement on the traffic forecast. In case TD has no comment on the methodology for traffic forecast only, the consultant should provide written confirmation from the respective competent party (e.g., traffic consultant) that TD's endorsed methodology has been strictly adopted in preparing the traffic forecast data, and hence the validity of traffic data can be confirmed.	Noted. TD's endorsement will be provided once received.
3.	It is noted that the applicant proposes to modify an existing noise barrier for construction of access roads to the application sites. As such, for the sake of completeness, (a) the road traffic noise impact on the proposed development and nearby noise sensitive receivers (NSRs) due the modification of the noise barrier should be addressed and (b) schedule of implementation, for example, to remove the noise barrier only after the RCHD and RCHE are in place, or to provide interim measures (if required) to mitigate road traffic noise impact to nearby NSRs should be provided in the noise impact assessments in the updated EAs. Also, the applicant should (c) provide TD's endorsement on the traffic data adopted in the updated NIAs and (d) ensure the separated cells of the dormitory should not be divided by full-height partitions.	Noted with thanks.
4.	Nevertheless, it is understood from our conversation that the applicant can commit to submit updated NIAs as an approval condition if the planning applications are approved. As such, we consider the above-mentioned issues can be addressed under the updated NIAs to be submitted under approval condition. To ensure proper documentation, please state clearly in the revised EAs that i. updated NIAs will be submitted under approval condition if the planning applications are approved; ii. the above-mentioned issues (a-d) will be addressed under the updated NIAs to be submitted under approval condition; and iii. any modification to the noise barrier is subject to the approval of relevant government department, i.e., the HyD.	Noted and revised accordingly.

5.	For other aspects including air quality, water quality, waste management and land contamination in the revised EAs, we have no comment on them. Thanks.	Noted with thanks.
	Sewerage	See revised Sewerage Impact Assessment (**Appendix 3**).
1.	RtC item 2(a) & Section 2.3.1 – Please delete the second last sentence if the information has been included under Table 2.2	The sentence has been deleted.
2.	RtC item 3, Section 2.3.2 & Section 2.4.2 & Appendix B– Please confirm and state if the planned sewers mentioned under Section 2.4.2 means proposed sewers P1 to P15 and upgraded sewer MH540 to MH235 under planning application No. A/YL-NSW/314, and if other sewers as proposed by other planning applications mentioned under Section 2.3.2 are not proposed to be utilised by the proposed development under this SIA. If this is the case, a hydraulic assessment adopting proposed sewers P1 to P15 and upgraded sewer MH540 to MH235 under planning application No. A/YL-NSW/314 would serve the purpose and the last two sentences of Section 2.3.2 should be deleted. If not, please consider different sewage disposal scenarios the SIA including hydraulic assessment.	It is confirmed that planned sewers mentioned under Section 2.4.2 means proposed sewers P1 to P15 and upgraded sewer MH540 to MH235 under planning application No. A/YL-NSW/314. The last two sentences of Section 2.3.2 had been deleted.
3.	Section 2.4.2 – Please revise the second sentence as “In case these planned sewers i.e. proposed sewers between MH235 to FSH1001886 and upgraded sewers between MH540 to MH235 under planning application No. A/YL-NSW/314 are not available…”.	Revised.
4.	Appendix B – “178 beds” should read “208 beds” under “Remarks”.	Revised.

Appendix 1

Revised Traffic Impact Assessment (TIA)

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Lots 3670 RP (Part), 3671 RP (Part), 3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104, Nam Sang Wai, Yuen Long

Traffic Impact Assessment
Revised Report
December 2025

Prepared by: CKM Asia Limited

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Lots 3670 RP (Part), 3671 RP (Part),3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104,Nam Sang Wai, Yuen Long

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Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Lots 3670 RP (Part), 3671 RP (Part),3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104,Nam Sang Wai, Yuen Long

TABLES

NUMBER

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Lots 3670 RP (Part), 3671 RP (Part),3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104,Nam Sang Wai, Yuen Long

FIGURES

NUMBER

1.0 INTRODUCTION

Background

1.1 The Subject Site is located at lots 3670 RP (Part), 3671 RP (Part), 3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104, Nam Sang Wai, Yuen Long. The location of the Subject Site is shown in Figure 1.1.

1.2 The owner has the intention to develop the Subject Site into a Residential Care Home for the Elderly with no more than 240 beds (the "Proposed RCHE").

1.3 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned to conduct a Traffic Impact Assessment ("TIA") in support of the Proposed RCHE. The report presents the findings and recommendations of the TIA for the Proposed RCHE.

Scope of the Assessment

1.4 The main objectives of this TIA are as follows:

- To assess the existing traffic issues in the vicinity of the Subject Site;
- To quantify the amount of traffic generated by the Proposed RCHE; and
- To examine the traffic impact on the local road network in the vicinity of the Subject Site.

Contents of the Report

1.5 After this introduction, the remaining chapters contain the following:

Chapter Two	-	describes the existing situation;
Chapter Three	-	outlines the development proposal;
Chapter Four	-	presents the traffic impact analysis; and
Chapter Five	-	summarises the overall conclusion

2.0 THE EXISTING SITUATION

The Subject Site

2.1 The Subject Site is located to the immediate north of Kam Pok Road East. At present, the Subject Site has no vehicular access.

Existing Road Network

2.2 Kam Pok Road East is a rural road, and it is of single carriageway 2-lane standard. It connects with Kam Pok Road to the west and Castle Peak Road – Tam Mi to the east.

2.3 Castle Peak Road – Tam Mi is a rural road, and it is of single carriageway2-lane standard. It connects with The Fairview Park Roundabout to the north and Kam Pok Road East to the south.

Traffic Survey

2.4 To quantify the traffic flows at the junctions chosen for the capacity analysis, manual classified counts were conducted on Friday, 7th March 2025 during the AM and PM peak periods. The locations of the surveyed junctions are presented in Figure 2.1 and their layouts are shown in Figures 2.2 to 2.4.

2.5 The surveyed junctions include the following:

- J1: Kam Pok Road / Kam Pok Road East;
- J2: Castle Peak Road – Tam Mi / Kam Pok Road; and
- J3: The Fairview Park Roundabout

2.6 The counts were classified by vehicle type to enable traffic flows in passenger car units ("pcu") to be calculated. From the survey, the AM and PM peak hours were found to be between 0800 – 0900 and 1700 – 1800 hours respectively.

2.7 Reference is made to the 2023 Annual Traffic Census ("ATC") closest core station, which is 5016 San Tin Highway, Castle Peak Road & San Tam Road (from Kam Tin Road to Fairview Park Boulevard), and found that traffic flow for the month of March, when the traffic survey for the captioned was conducted, is around 1.5% lower than the annual monthly average. Hence, the observed traffic flows are adjusted upwards by 1.5%. The revised existing AM and PM peak hour traffic flows are presented in Figure 2.5.

Operational Performance of the Surveyed Junctions

2.8 The existing operational performance of the surveyed junctions is calculated based on the observed traffic counts and the analysis is undertaken using the methods outlined in Volume 2 of Transport Planning and Design Manual ("TPDM"). The existing operational performance of the junctions are summarised in Table 2.1 and the detailed calculations are found in Appendix 1.

TABLE 2.1 EXISTING JUNCTION OPERATIONAL PERFORMANCE

Ref.	Junction	Type of Junction	Parameter(1)	AM Peak Hour	PM Peak Hour
J1	Kam Pok Road / Kam Pok Road East	Priority	RFC	0.315	0.220
J2	Castle Peak Road – Tam Mi / Kam Pok Road	Signal	RC	22%	35%
J3	The Fairview Roundabout	Roundabout	RFC	0.492	0.507

Notes: (1) RC – reserve capacity RFC – Ratio of Flow to Capacity

2.9 Table 2.1 shows that the junctions now operate with capacity.

Public Transport Facilities

2.10 The Subject Site is located close to public transport services with franchised bus and public light bus routes operating in the vicinity. Details of the franchised bus and green minibus ("GMB") routes operating in the vicinity of the Subject Site are presented in Figure 2.6 and Table 2.2.

TABLE 2.2 FRANCHISED BUS AND GMB SERVICES OPERATING CLOSE TO THE SUBJECT SITE

Route	Routing	Frequency (minutes)
KMB 76K	Long Ping Estate – Ching Ho Estate	20 – 30
KMB 268	Sham Tseng – Kwun Tong (Tsui Ping North Estate)	30 – 35
CTB 976	Sai Wan Ho – Lok Ma Chau (San Tin)	6 per day
CTB 976A	Siu Sai Wan (Island Resort) – Lok Ma Chau (San Tin)	2 per day
GMB 36	Yuen Long (Fook Hong Street) – Tai Sang Wai Rural Office	10 – 15
GMB 37	Yuen Long (Fook Hong Street) – Yau Tan Mei Village Office	12 – 15
GMB 38	Yuen Long (Fook Hong Street) – Yau Tam Mei West	10 – 15
GMB 75	Yuen Long (Fook Hong Street) – Lok Ma Chau Spur Line Public Transport Interchange	7 – 9
GMB 76	Yuen Long (Fook Hong Street) – Siu Hum Tsuen	15 – 20
GMB 78	Pat Heung Road (near Tai Lam Bus-Bus Interchange) – Lok Ma Chau (San Tin) Public Transport Interchange	20 – 25

Note: KMB – Kowloon Motor Bus CTB – Citybus GMB – Green Minibus

Trip Generation Rates for RCHE

2.11 In view that the TPDM does not have trip generation rates for RCHE, trip generation surveys were conducted at 4 RCHEs. Details of these RCHEs are found in Table 2.3, and survey results are presented in Table 2.4.

TABLE 2.3 DETAILS OF THE SURVEYED RCHEs

Ref.	RCHE	Address	No. of beds	Distance from nearest MTR Station
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	60 - 62 Tin Wan Street, Tin Wan	392	2.8 km (Wong Chuk Hang Station)
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	16 Wah Fat Street, Tuen Mun	260	2.2 km (Tuen Mun Station)
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	5 Sha Wan Drive, Pok Fu Lam, Hong Kong	175	3.5km (Kennedy Town Station)
4	Forward Living	9 Fu Tei Road, Tuen Mun	229	1km (Siu Hong Station)

TABLE 2.4 TRIP RATES OF THE SURVEYED RCHEs

Ref.	RCHE	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
Traffic Generation (pcu/hr)					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	6	3	4	6
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	12	8	7	13
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	6	2	3	7
4	Forward Living	7	5	6	10
Trip Rates (pcu/hour/ bed)					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	0.0153	0.0077	0.0102	0.0153
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	0.0462	0.0308	0.0269	0.0500
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	0.0343	0.0114	0.0171	0.0400
4	Forward Living	0.0306	0.0218	0.0262	0.0437
	Adopted (maximum rates) =	0.0462	0.0308	0.0269	0.0500

Pedestrian Generation Rates for RCHE

2.12 In view that the TPDM does not have pedestrian generation rates for RCHE, pedestrian generation surveys were also conducted at the 4 RCHEs found in Table 2.3, and the survey results are presented in Table 2.5.

TABLE 2.5 PEDESTRIAN TRIP RATES OF THE SURVEYED RCHEs

Ref.	RCHE	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
Pedestrian Generation (pedestrian/15 min)					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	16	7	5	18
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	16	5	3	17
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	9	2	1	7
4	Forward Living	14	4	2	13
Pedestrian Generation Rates (pedestrian/15 min/bed)					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	0.0408	0.0179	0.0128	0.0459
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	0.0615	0.0192	0.0115	0.0654
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	0.0514	0.0114	0.0057	0.0400
4	Forward Living	0.0611	0.0175	0.0087	0.0568
	Adopted (maximum rates) =	0.0615	0.0192	0.0128	0.0654

Utilisation of Surveyed Bus Stops

2.13 An utilisation survey was conducted during the AM and PM peak periods at Tai Sang Wai (towards San Tin) and Long Ha (towards Yuen Long) bus stops and the

pedestrian route to 2 surveyed bus stops is presented in Figure 2.7. The results are presented in Tables 2.6 and 2.7 respectively.

TABLE 2.6 RESULTS OF THE UTILISATION SURVEY AT TAI SANG WAI (TOWARDS SAN TIN) BUS STOP

Route[1]	No. of Vehicle	No. of Passengers on-board[2] [a]	Capacity[3] [b]	Vacancy [b] – [a]	Occupancy [a] / [b]
AM Peak					
KMB 76K	3	146	384	238	38.0%
KMB 268	2	14	124	110	11.3%
GMB 37	5	65	86	21	75.6%
GMB 38	6	77	102	25	75.5%
GMB 75	3	27	51	24	52.9%
GMB 76	2	15	32	17	46.9%
GMB 78	2	12	38	26	31.6%
Total	23	356	817	461	43.6%
PM Peak					
KMB 76K	3	154	384	230	40.1%
KMB 268	2	14	124	110	11.3%
GMB 37	7	93	118	25	78.8%
GMB 38	9	95	147	52	64.6%
GMB 75	3	36	48	12	75.0%
GMB 76	1	10	19	9	52.6%
GMB 78	2	12	38	26	31.6%
Total	27	414	878	464	47.2%

Note: [1] KMB – Kowloon Motor Bus GMB – Green Minibus
[2] Passengers counted the moment before the vehicles departed from the bus stop
[3] Assumed capacities: Double-decker = 128, Single-decker = 62

TABLE 2.7 RESULTS OF THE UTILISATION SURVEY AT LONG HA (TOWARDS YUEN LONG) BUS STOP

Route[1]	No. of Vehicle	No. of Passengers on-board[2] [a]	Capacity[3] [b]	Vacancy [b] – [a]	Occupancy [a] / [b]
AM Peak					
KMB 76K	3	89	384	295	23.2%
KMB 268	2	14	124	110	11.3%
GMB 37	6	71	99	28	71.7%
GMB 38	2	22	32	10	68.8%
GMB 75	5	70	86	16	81.4%
GMB 76	2	16	32	16	50.0%
Total	20	282	757	475	37.3%
PM Peak					
KMB 76K	2	70	256	186	27.3%
KMB 268	3	21	186	165	11.3%
GMB 37	5	46	86	40	53.5%
GMB 38	4	40	67	27	59.7%
GMB 75	3	38	48	10	79.2%
GMB 76	3	33	51	18	64.7%
Total	20	248	694	446	35.7%

Note: [1] KMB – Kowloon Motor Bus GMB – Green Minibus
[2] Passengers counted the moment before the vehicles departed from the bus stop
[3] Assumed capacities: Double-decker = 128, Single-decker = 62

2.14 Table 2.6 shows that the utilisation of the franchised buses at Tai Sang Wai (towards San Tin) bus stop is 43.6% during the AM Peak Hour and 47.2% during the PM Peak Hour. Whilst, Table 2.7 shows that the utilisation of the franchised buses at Long Ha (towards Yuen Long)) bus stop is 37.3% during the AM Peak Hour and 35.7% during the PM Peak Hour.

3.0 THE PROPOSED RCHE

Proposed RCHE

3.1 The Proposed RCHE consists of 1 building block with no more than 240 beds and is targeted for completion by 2030. The vehicular assess of Proposed RCHE is provided at Kam Pok Road East.

Provision of Internal Transport Facilities

3.2 The HKPSG has no recommendation on the provision of internal transport facilities for RCHE, hence, reference is made to the 4 RCHEs listed in Table 2.3. The internal transport facilities provision rate derived from the 4 RCHEs are found in Table 3.1.

TABLE 3.1 INTERNAL TRANSPORT FACILITIES PROVIDED IN SURVEYED RCHEs

Ref.	RCHE	No. of beds	Internal Transport Facilities		
			Car	Light Bus / Ambulance	LGV
Parking Provision					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	392	8	0	1
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	260	5	1	0
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	175	8	0	0
4	Forward Living	229	4	0	0
Provision rate (space / bed)					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	392	0.020	0.000	0.003
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	260	0.019	0.004	0.000
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	175	0.045	0.000	0.000
4	Forward Living	229	0.018	0.000	0.000
	Adopted provision rate =		0.045	0.004	0.003

3.3 Based on the adopted provision rate in Table 3.1, the calculated internal transport facilities for the Proposed RCHE are presented in Table 3.2.

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES THE FOR PROPOSED RCHE

Use	No. of beds	Internal Transport facilities	Provision	Dimensions
RCHE	240	Car Parking Space	11	10 @ 5m (L) x 2.5m (W) x 2.4m (H), and 1 @ 5m (L) x 3.5m (W) x 2.4m (H) for persons with disabilities
		LGV loading / unloading bay	1	1 @ 7m (L) x 3.5m (W) x 3.6m (H)
		Light Bus / Ambulance Parking Space	1	1 @ 9m (L) x 3.0m (W) x 3.3m (H)

3.4 The carpark layout plans for G/F and B/F are shown in Figures 3.1 – 3.2.

3.5 The measured length of visibility splay for the motorists leaving the Proposed RCHE is 60m to the left and 60m to the right, which is illustrated in Figure 3.3.

Swept Path Analysis

3.6 The CAD-based swept path analysis program, Autodesk Vehicle Tracking, was used to check the ease of vehicle manoeuvring. Vehicles are found to have no manoeuvring problems and all vehicles could enter and leave the spaces with ease. The swept path analysis drawings for critical movements are found in Appendix 2.

4.0 TRAFFIC IMPACT

Design Year

4.1 The Proposed RCHE is expected to be completed by 2030, and the design year adopted for the capacity analysis is 2033, i.e. 3 years after the completion of the Proposed RCHE.

Traffic Forecasting

4.2 The 2033 traffic flows used for the junction analysis are produced with reference to the following:

(i) 2031 traffic flows derived based on the NTW1 Base District Traffic Model ("BDTM");

(ii) estimated traffic growth from 2031 to 2033 based on the higher of: (a) Hong Kong Population Projections 2022 – 2046, published by Census and Statistics Department, or (b) historic Annual Average Daily Traffic ("AADT") in ATC produced by Transport Department;

(iii) the other developments in the vicinity of the Proposed RCHE; and

(iv) Traffic generated by the Proposed RCHE.

4.3 The (ii) estimated traffic growth from 2031 to 2033, (iii) the other development in the vicinity of the Proposed RCHE and (iv) traffic generated by the Proposed RCHE are presented in the paragraphs below.

Estimated Growth Rate from 2031 to 2033

4.4 The (a) Hong Kong Population Projections 2022 – 2046, and (b) historic AADT in ATC are summarised in Tables 4.1 – 4.2 respectively.

TABLE 4.1 HONG KONG POPULATION PROJECTIONS 2022 – 2046

Whole Territory Population		Annual Growth Rate
Year 2031	Year 2033	2031 to 2033
7,820,200	7,903,600	0.53%

TABLE 4.2 AADT OF THE STATION IN THE VICINITY OF THE SUBJECT SITE

Year \ Station	5016	5019	5257	5297	5505	5508	5496	Overall
2013	90,610	34,530	12,620	8,220	9,030	68,040	35,980	259,030
2014	88,800	36,490	10,600	6,200	11,990	72,580	30,750	257,410
2015	86,180	34,380	10,510	6,140	12,090	85,910	27,750	262,960
2016	92,230	31,990	10,940	6,400	12,590	90,760	28,900	273,810
2017	90,650	30,040	10,770	6,300	12,390	90,110	28,450	268,710
2018	86,230	29,300	11,980	8,540	12,700	92,980	29,150	270,880
2019	90,860	30,160	11,910	7,530	13,330	80,460	26,970	261,220
2020	81,870	27,640	11,420	7,220	13,420	82,010	13,100	236,680
2021	86,620	29,600	11,880	7,510	13,960	86,000	13,630	249,200
2022	82,820	28,180	11,520	7,280	13,540	82,190	13,210	238,740
2023	88,760	55,700	10,740	10,960	13,860	87,340	13,520	280,880
Average Annual Growth								0.81%

Note: 5016 – San Tin Highway, Castle Peak Road & San Tam Road (From Kam Tin Road to Fairview Park Boulevard)
5019 – Castle Peak Road – Yuen Long (From Yuen Long On Lok Road to Kam Tin Road)
5257 – Castle Peak Road – Tam Mi, Mai Po & San Tin (From Fairview Park Boulevard to Lok Ma Chau Road)
5297 – San Tam Road (From Castle Peak Road – Mai Po to Fairview Park Boulevard Roundabout)
5505 – Sam Tam Road (From Fairview Park Boulevard RA to End)
5508 – San Tin Highway (From Fairview Park Boulevard to Lok Ma Chau Road)
5496 – San Sham Road (From San Tin Interchange to End of San Sham Road)

4.5 Table 4.1 shows that the annual growth rate from 2031 to 2033 is +0.53%. Table 4.2 shows that in the historic AADT of the stations between 2013 and 2023 in the vicinity has average annual growth rate of +0.81% per annum. To be conservative, the growth rate of +1.00% per annum is adopted for the traffic growth between 2031 and 2033.

Other Developments in the Vicinity of the Proposed RCHE

4.6 The major planned developments in the vicinity of the Proposed RCHE are summarized in Table 4.3, and are included in the traffic forecast.

TABLE 4.3 DETAILS OF MAJOR PLANNED DEVELOPMENTS

Site	Address	Use	Development Parameter (Approx.)
1	TPB ref.: Y/YL-MP/9: Lots 50 S.A and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long	Residential	Around 3562 flats
2	TPB ref.: Y/YL-MP/10: Lots 3152, 3153 RP, 3156 S.B and 4805 in D.D. 104 and Adjoining Government Land (GL), Kam Pok Road, Mai Po, Yuen Long	Residential	Around 2322 flats
3	TPB ref.: Y/YL-NSW/7: Various Lots in D.D. 104 and adjoining Government Land, Wing Kei Tsuen, Nam Sang Wai, Yuen Long	Residential	Around 1,997 flats
4	TPB ref.: Y/YL-NSW/8: Lots 8 RP (Part), 8 S.A RP, 12, 13, 14 S.B ss.2, 14 S.B RP, 14 S.C RP, 16, 17, 31 S.B RP, 33 RP, 36 RP, 45, 55 S.A and 1740 S.A RP in D.D.107 and Adjoining Government Land, West of Castle Peak Road – Tam Mi, Yuen Long	Residential	Around 6,825 flats
5	TPB ref.: Y/YL-NSW/9: Lots 1910 RP (Part) and 1743 S.C RP (Part) in D.D. 107 and Adjoining Government Land, West of Castle Peak Road – Tam Mi, Yuen Long	Residential	Around 3,115 flats
6	TPB ref.: Y/YL-NTM/9A: Lot 4823 in D.D. 104, Ngau Tam Mei, Yuen Long, New Territories	RCHE	Around 142 beds
7	TPB ref.: A/YL-MP/287: Lots 3207 RP, 3209 RP, 3220 RP, 3221 RP, 3224 RP, 3225 S.A RP, 3225 S.C RP, 3225 RP, 3226 S.A RP, 3226 RP, 3228, 3229, 3230 RP, 3250 S.B ss.21 RP, 3250 S.B ss.33 S.B, 3250 S.B ss.40 S.A RP, 3250 S.B ss.40 RP and 4658 RP in D.D. 104 and Adjoining Government Land, Mai Po, Yuen Long, New Territories	Residential	Around 65 flats
8	TPB ref.: A/YL-NSW/274: Lots 592 S.C ss.1 S.A, 592 S.C ss.4 and 1252 S.C in D.D. 115, Tung Shing Lei, Yuen Long	Residential, Office and Special Child Care Centre (SCCC)	Around 1518 flats, office with 1800m^2 GFA and 60-Place SCCC
9	TPB ref.: A/YL-KTN/663-1: Lots 1783 (Part), 1784 RP, 1788 RP, 1789 RP, 1790 RP (Part), 1791 RP, 1795 (Part), 1796 (Part), 1797 (Part), 1836 (Part), 1927 S.A and 1927 RP (Part) in D.D. 107 and Adjoining Government Land, Kam Tin, Yuen Long	Residential	Around 1,154 flats

Site	Address	Use	Development Parameter (Approx.)
10	TPB ref.: A/YL-MP/341: Various Lots in D.D. 104 and Adjoining Government Land, Yau Pok Road, Mai Po, Yuen Long	Residential	Around 2150 flats
11	TPB ref.: A/YL-NSW/314: Various lots in D.D.104, North of Kam Pok Road East, Pok Wai, Yuen Long, New Territories	Residential	Around 90 flats
12	TPB ref.: A/YL-KTN/604: Various Lots in D.D. 107 and Adjoining Government Land, Cheung Chun San Tsuen, Kam Tin, Yuen Long, New Territories	Residential, Retail / School and Social Welfare Facility	Around 3,891 flats, Retail / School with 5,500m^2 GFA and Social Welfare Facility with 800m^2 GFA
13	LSPS ref.: LSPS/002: Ho Chau Road, Yuen Long, New Territories (near Tung Shing Lei) (Various lots in D.D. 115 and adjoining Government land)	Residential and retail	Around 3,200 flats and retail with 3,000m^2 GFA

4.7 In addition, the infrastructure and road network considered in the traffic model include the following:

- San Tin Technopole
- Ngau Tam Mei New Development
- Sha Po Public Housing Development

Traffic Generated by the Proposed RCHE

4.8 Traffic generation associated with the Proposed RCHE is calculated based on results presented in Table 2.4, and the calculation is presented in Table 4.4. 24-hour breakdown of traffic generation is found in Appendix 3.

TABLE 4.4 TRAFFIC GENERATION OF THE PROPOSED RCHE

Item	AM Peak Hour			PM Peak Hour		
	In	Out	2-way	In	Out	2-way
Trip Generation Rates for RCHE (pcu/hour/bed) in Table 2.4						
RCHE	0.0462	0.0308	NA	0.0269	0.0500	NA
Traffic Generation of Proposed RCHE (pcu/hour)						
RCHE: 240 beds	12	8	20	7	12	19

4.9 Table 4.4 shows that the total 2-way traffic generated by the Proposed Development is only 20 and 19 pcu/hour (2-way) during the AM and PM peak hours respectively. Ingress and egress routes for traffic generated by the Proposed RCHE are presented in Figure 4.1.

2033 Traffic Flows

4.10 Year 2033 traffic flows for the following cases are derived:

2033 without the Proposed RCHE [A]	= (i) 2031 traffic flows derived with reference to BDTM + (ii) estimated total growth from 2031 to 2033 + (iii) Other Developments in the Vicinity of the Proposed RCHE
2033 with the Proposed RCHE [B]	= [A] + (iv) traffic generated by the Proposed RCHE (Table 4.4)

4.11 The 2033 peak hour traffic flows for the cases without and with the Proposed RCHE, are shown in Figures 4.2 - 4.3, respectively.

2033 Junction Operational Performance

4.12 Year 2033 capacity analysis for the cases without and with the Proposed RCHE are summarised in Table 4.5 and detailed calculations are found in the Appendix 1.

TABLE 4.5 2033 JUNCTION OPERATIONAL PERFORMANCE

Ref.	Junction	Type of Junction / Parameter[1]	Without the Proposed RCHE		With the Proposed RCHE	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Kam Pok Road / Kam Pok Road East	Priority / RFC	0.337	0.240	0.338	0.240
J2[2]	Castle Peak Road – Tam Mi / Kam Pok Road	Signal / RC	16%	24%	15%	22%
J3	The Fairview Roundabout	Roundabout / RFC	0.797	0.800	0.799	0.803

Notes: [1] RC – reserve capacity RFC – Ratio of Flow to Capacity
[2] Cycle time increased from 94s to 120s as proposed by the approved A/YL-NSW/314

4.13 Table 4.5 shows that the junctions operate with capacities during the AM and PM peak hours for the cases without and with the Proposed RCHE.

Impact on Utilisation of Surveyed bus stops

4.14 To be conservative, it is assumed that all pedestrians generated by the Proposed RCHE will use public transport services. The number of public transport passengers generated by the Proposed RCHE is calculated based on the pedestrian generation of the Proposed RCHE, as presented in Table 2.5, and the calculation is found in Table 4.6.

TABLE 4.6 PUBLIC TRANSPORT PASSENGERS GENERATED BY THE PROPOSED RCHE

Item	AM Peak Hour			PM Peak Hour		
	In	Out	2-way	In	Out	2-way
Pedestrian Generation Rates for RCHE (pedestrian/15 min/bed) in Table 2.5						
RCHE	0.0615	0.0192	NA	0.0128	0.0654	NA
Pedestrian Generation of Proposed RCHE (pedestrian/15 min)						
RCHE: 240 beds	15	5	20	4	16	20
Pedestrian Generation of Proposed RCHE (pedestrian/1 hour)						
RCHE: 240 beds	60	20	80	16	64	80

4.15 The public transport utilisation analysis is presented in Table 4.7.

TABLE 4.7 THE UTILISATION OF THE PUBLIC TRANSPORT SERVICES FOR THE CASE WITH THE PROPOSED RCHE

No.	Location	Occupancy of Public Transport Service	
		AM Peak	PM Peak
1	Tai Sang Wai (towards San Tin) Bus Stop	48.5%	51.7%
2	Long Ha (towards Yuen Long) Bus Stop	42.5%	41.5%

4.16 Table 4.7 shows that the public transport service have capacity to accommodate the passenger demand generated by the Proposed RCHE.

5.0 CONCLUSION

5.1 The Subject Site is located at lots 3670 RP (Part), 3671 RP (Part), 3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104, Nam Sang Wai, Yuen Long. The owner has the intention to develop the Subject Site into a RCHE with no more than 240 beds.

5.2 Manual classified counts were conducted at junctions located in the vicinity of the Proposed RCHE in order to establish the peak hour traffic flows. Currently, these junctions operate with capacities during the AM and PM peak hours.

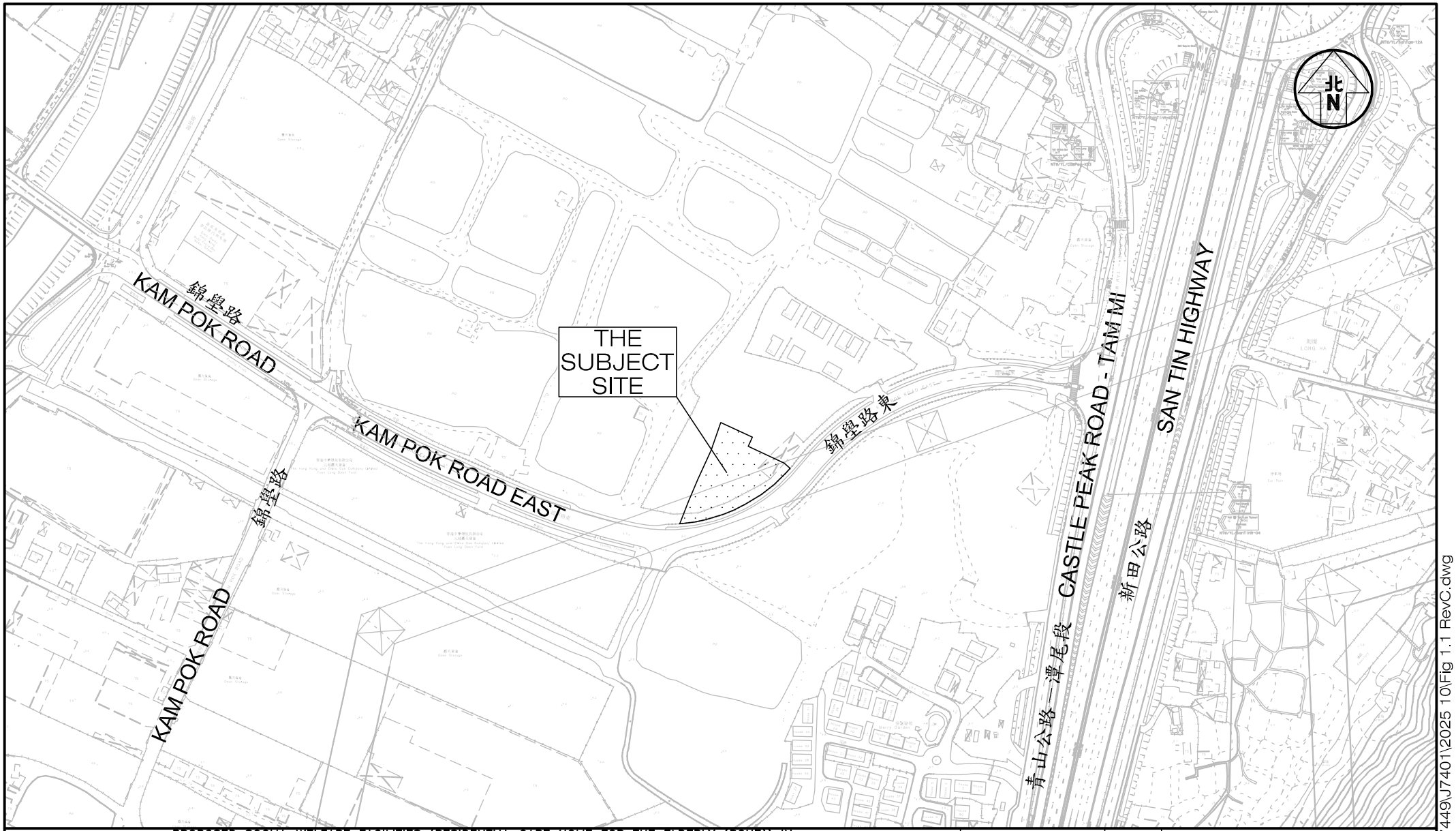
5.3 The internal transport facilities for the Proposed RCHE are provided based on the operational needs with the reference to 4 surveyed RCHEs.

5.4 The Proposed RCHE is expected to be completed by 2030, and the junction capacity analysis is undertaken for year 2033. For the design year 2033, the junctions analysed are expected to operate with capacities during the peak hours for the case without and with the Proposed RCHE.

5.5 The public transport services at 2 surveyed bus stops have capacity to accommodate the passenger demand generated by the Proposed RCHE.

5.6 It is concluded that the Proposed RCHE will result in no adverse traffic impact to the surrounding road network. From traffic engineering grounds, the Proposed RCHE is acceptable.

Figures



Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. 1.1 / Revision C
Figure Title	LOCATION OF SUBJECT SITE	Designed by L C H / Drawn by N C M / Checked by K C	Scale in A4 1 : 3000 / Date 03 OCT 2025

CKM Asia Limited
Traffic and Transportation Planning Consultants
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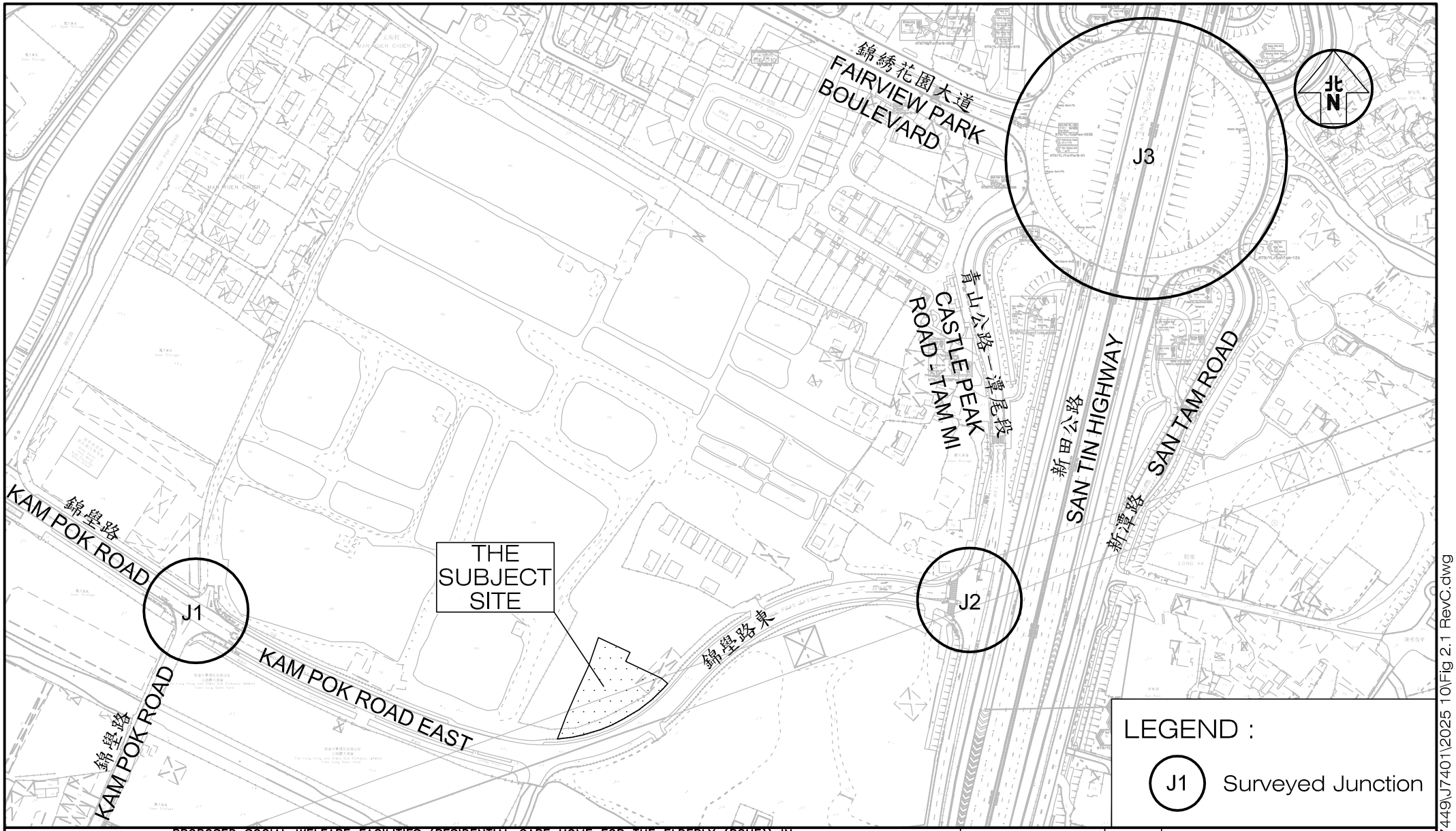

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Figure Title	LOCATION OF SURVEYED JUNCTIONS	Designed by L C H / Drawn by N C M / Checked by K C	Scale in A4 1 : 3000 / Date 03 OCT 2025

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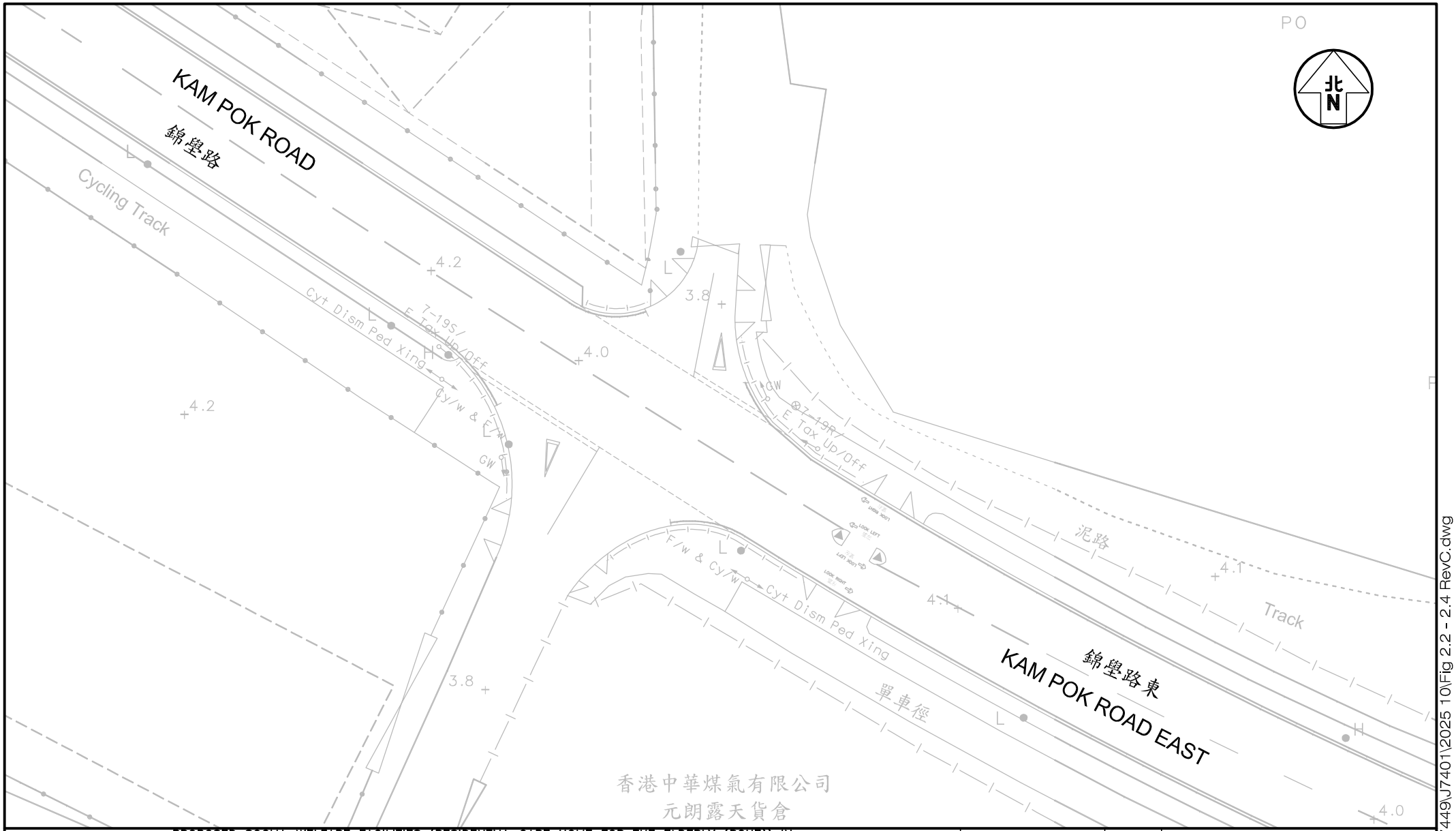

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Figure Title	EXISTING JUNCTION LAYOUT OF KAM POK ROAD / KAM POK ROAD EAST		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 500 / Date 03 OCT 2025

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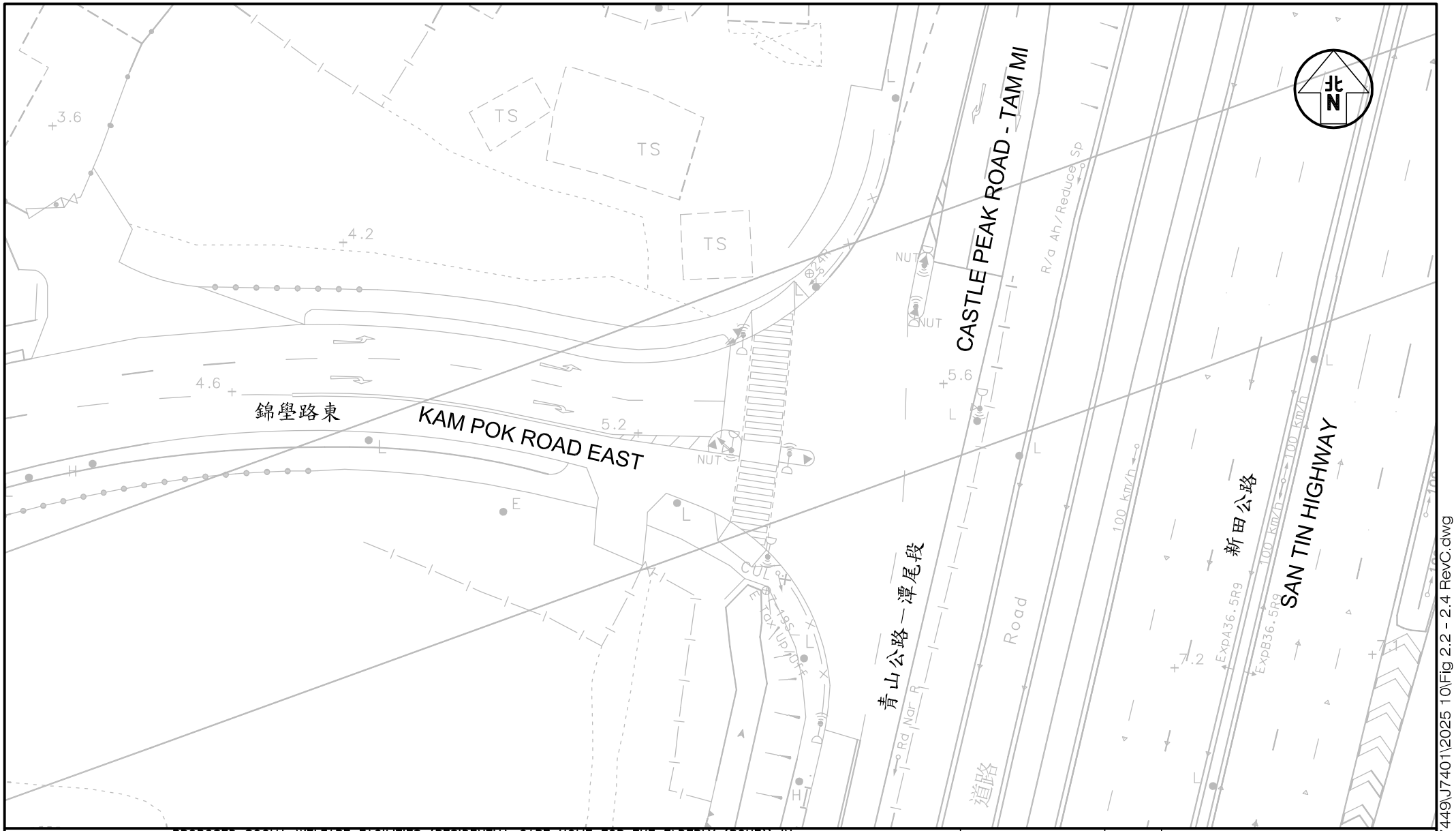

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Figure Title	EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD – TAM MI / KAM POK ROAD		Designed by L C H / Drawn by N C M / Checked by K C
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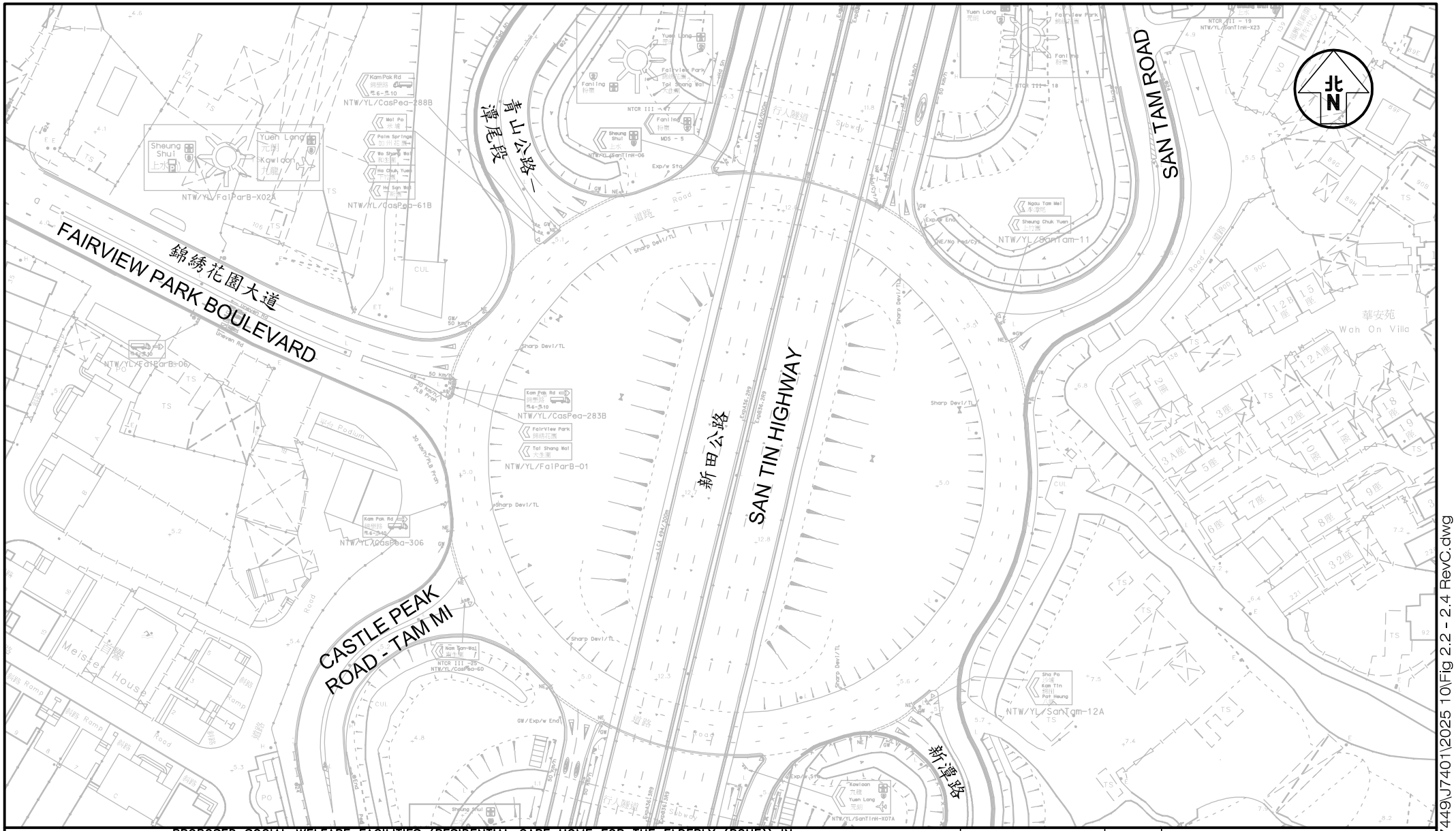

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Figure Title	EXISTING JUNCTION LAYOUT OF THE FAIRVIEW PARK ROUNDABOUT		Designed by L C H / Drawn by N C M / Checked by K C
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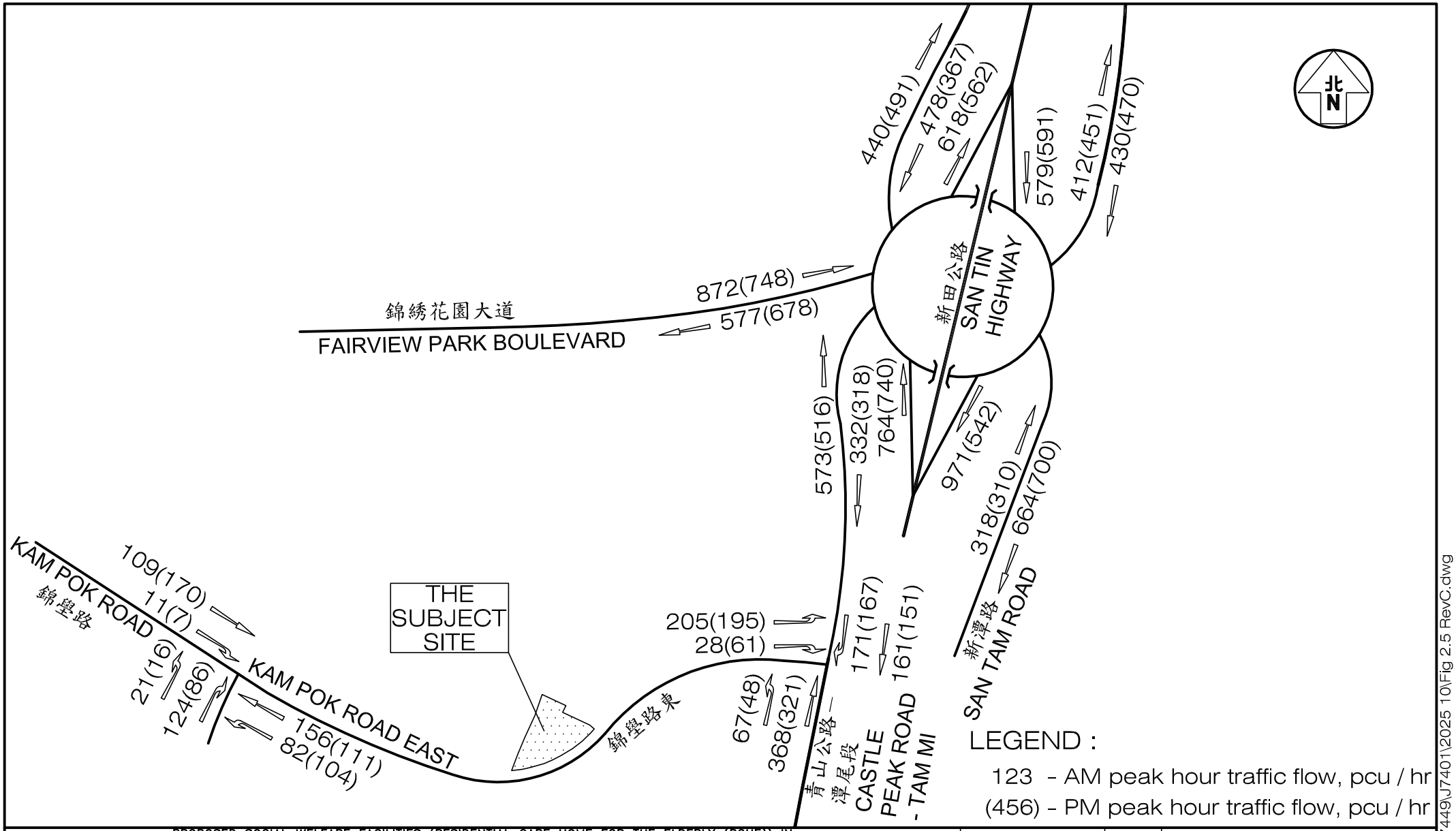

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Figure Title	EXISTING PEAK HOUR TRAFFIC FLOWS	Designed by L C H / Drawn by N C M / Checked by K C	Scale in A4 N.T.S. / Date 03 OCT 2025

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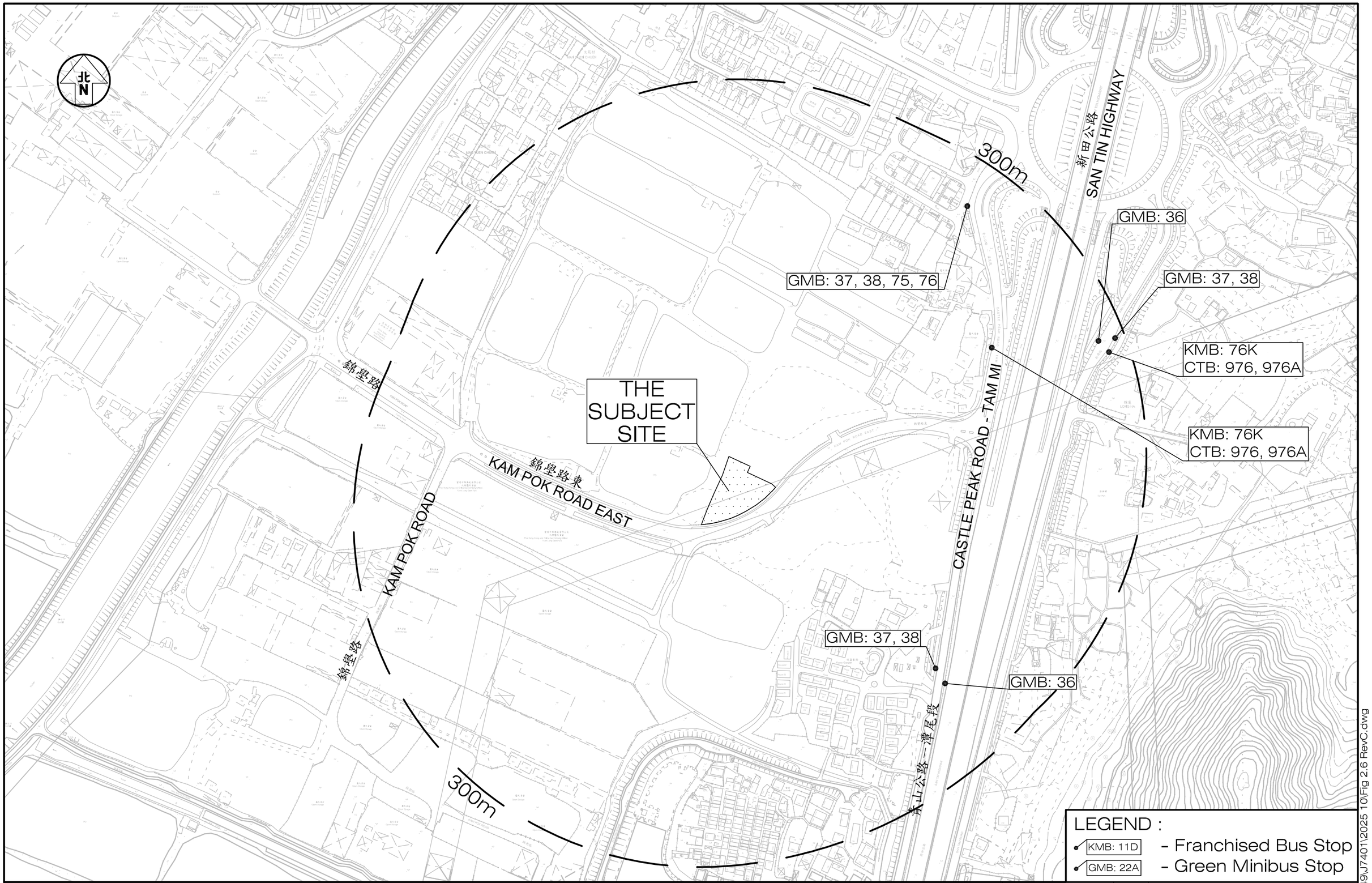

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Figure Title	THE PUBLIC TRANSPORT SERVICES PROVIDED IN THE VICINITY OF THE SUBJECT SITE	Designed by L C H / Drawn by N C M / Checked by K C	
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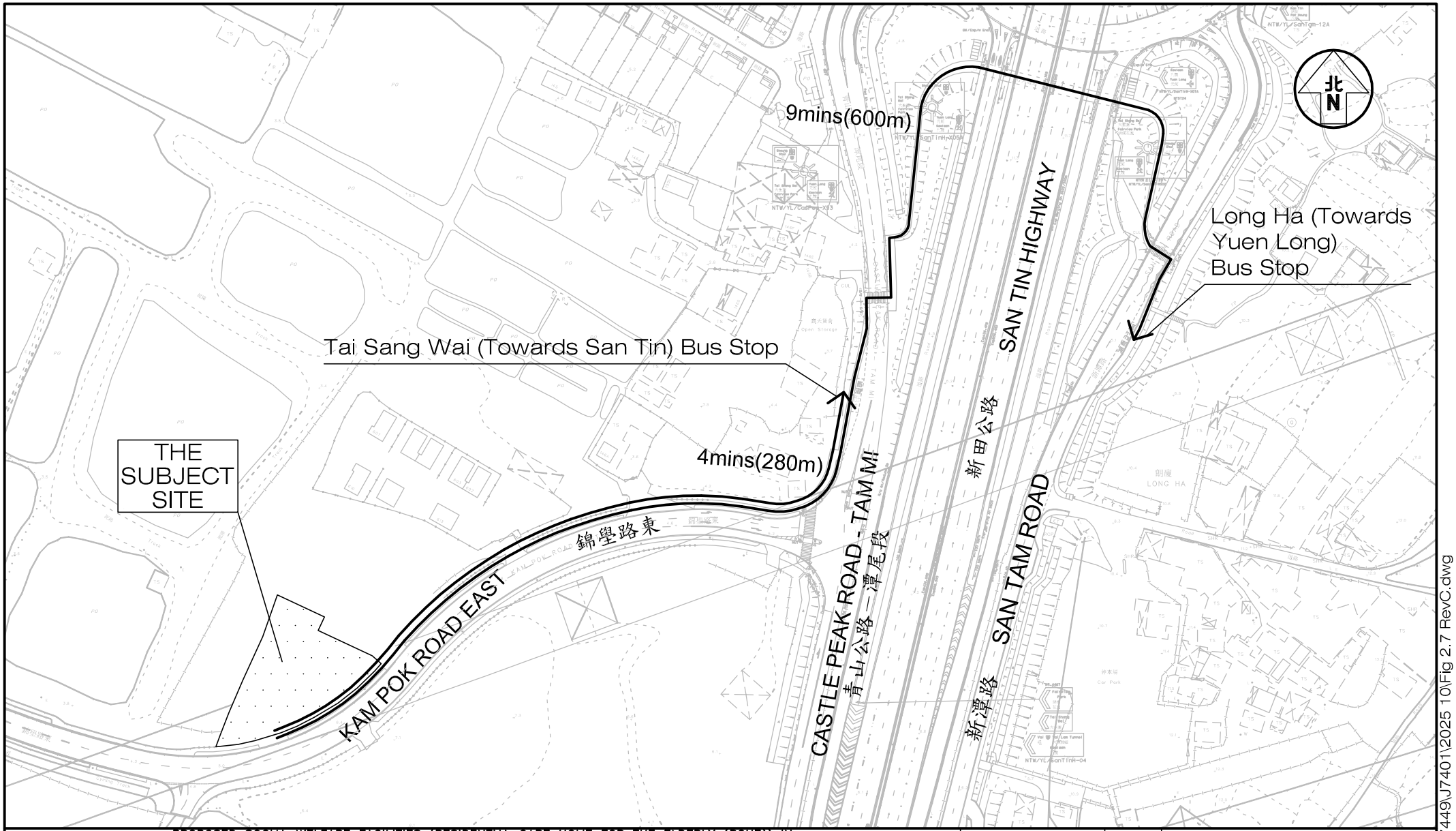

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Figure Title	THE WALKING PATH BETWEEN THE PROPOSED RCHE AND THE NEARBY FRANCHISED BUS STOPS		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 2000 / Date 03 OCT 2025

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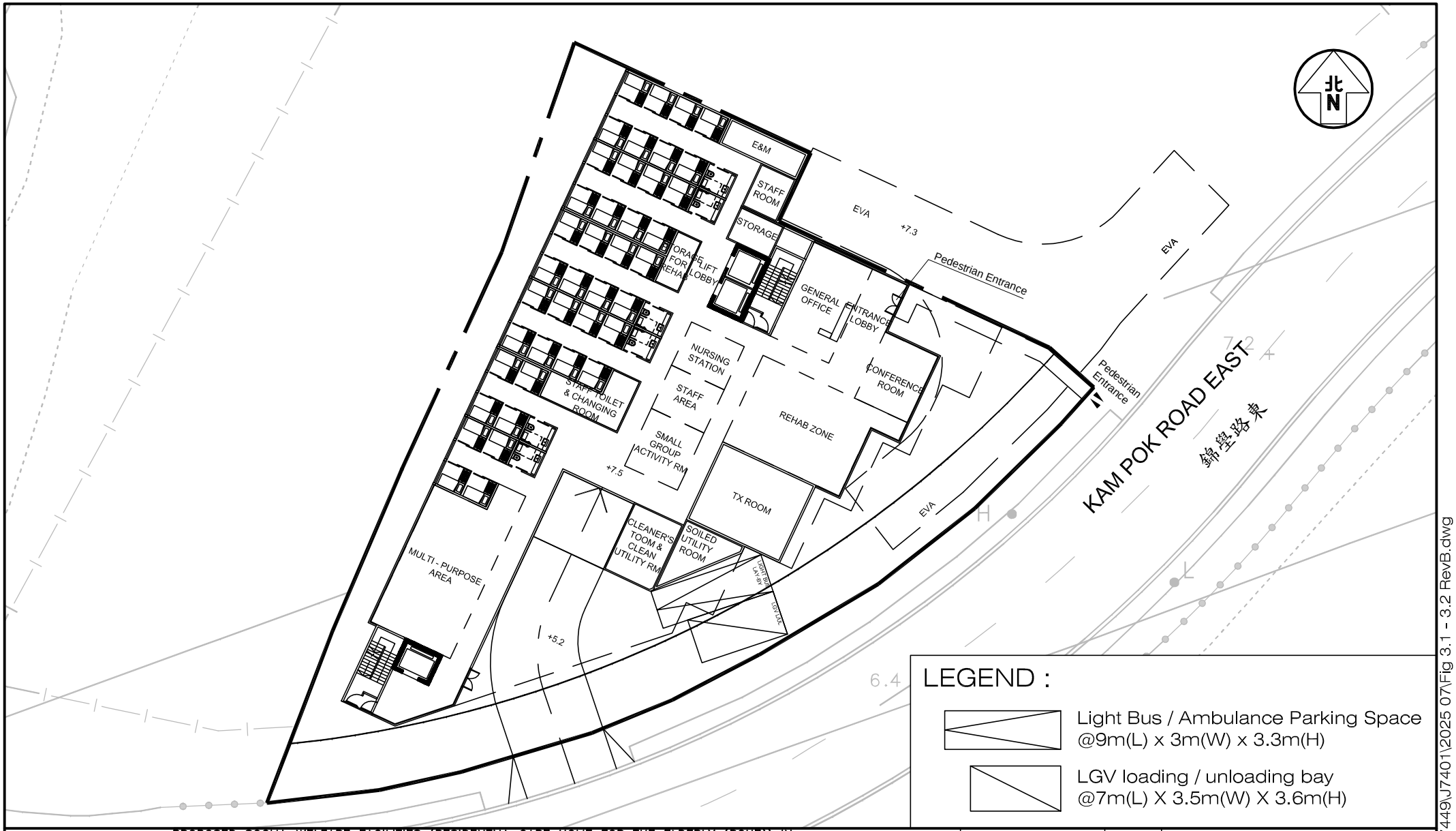

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Figure Title	G/F LAYOUT PLAN	Designed by L C H / Drawn by N C M / Checked by K C	Scale in A4 1 : 400 / Date 03 OCT 2025

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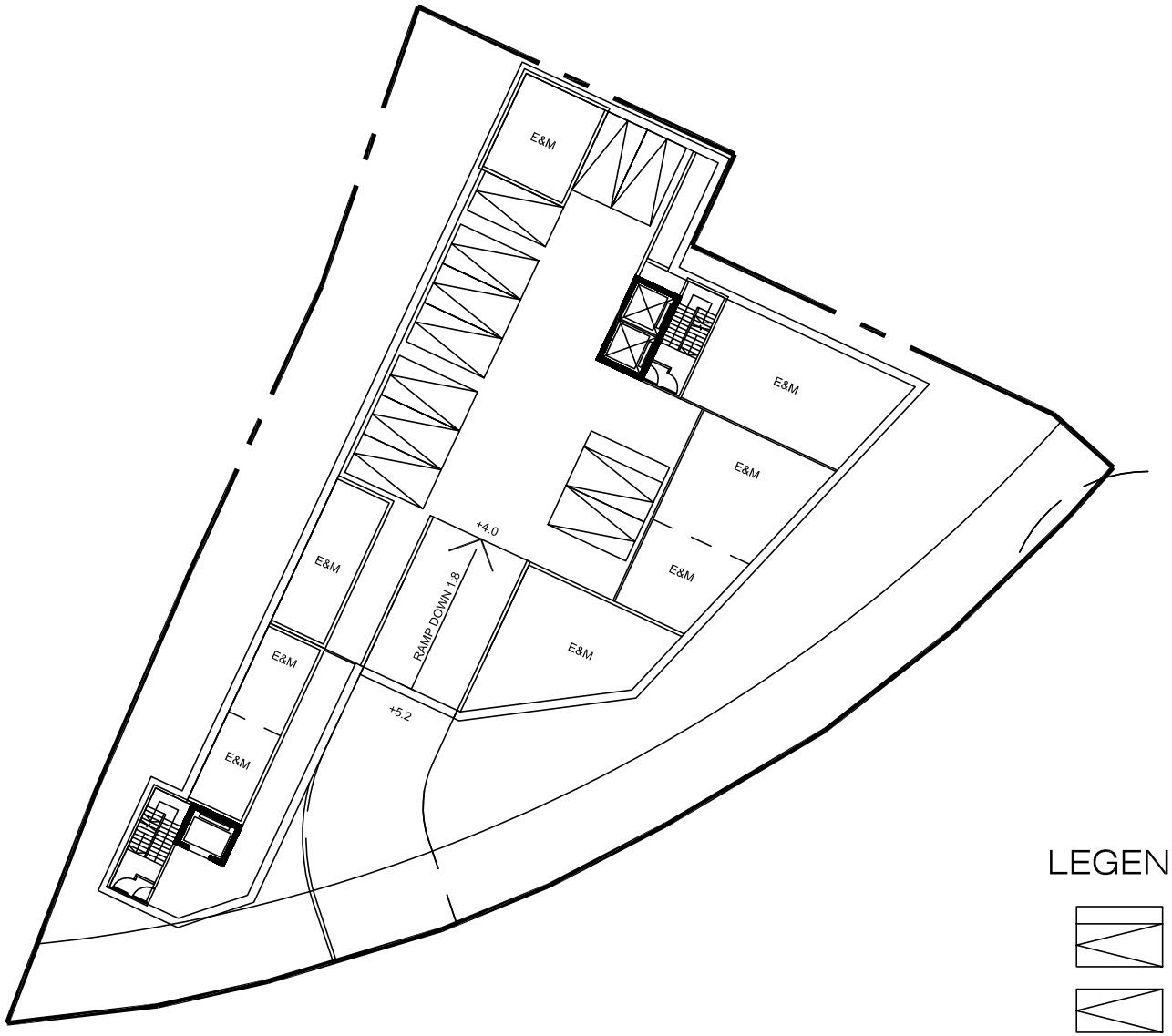

N

LEGEND :

Accessible car parking space
@5m(L) X 3.5m(W) X 2.4m(H)

Private car parking space
@5m(L) X 2.5m(W) X 2.4m(H)

Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. 3.2 / Revision C
Figure Title	B/F LAYOUT PLAN	Designed by L C H / Drawn by N C M / Checked by K C	Scale in A4 1 : 400 / Date 03 OCT 2025

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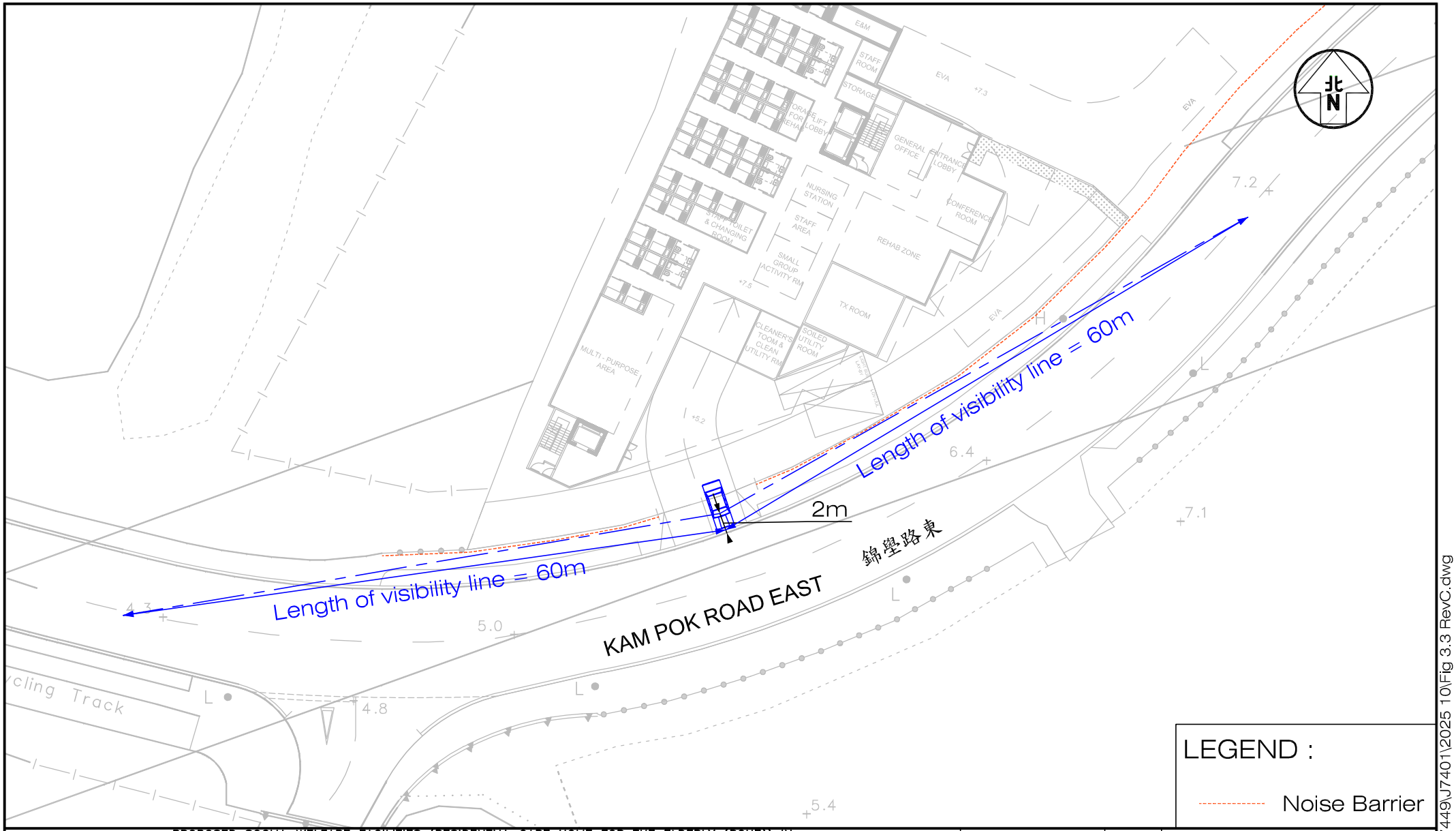

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Figure Title	LENGTH OF VISIBILITY LINE FOR THE MOTORIST LEAVING THE PROPOSED RCHE AT KAM POK ROAD EAST		Designed by C Y Y / Drawn by N C M / Checked by K C
			Scale in A4 1 : 500 / Date 03 OCT 2025

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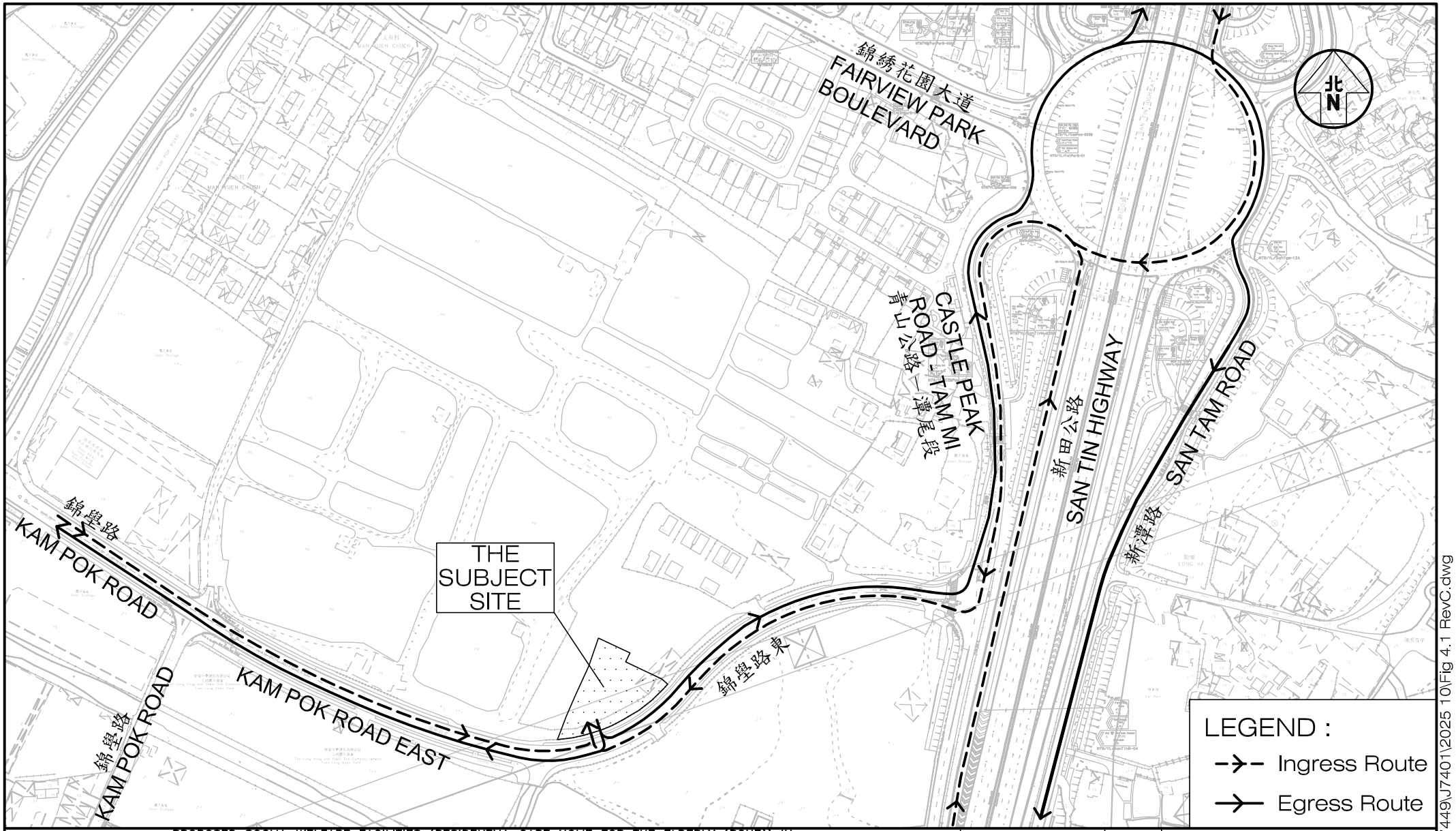

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Figure Title	THE VEHICULAR INGRESS / EGRESS ROUTES OF THE PROPOSED RCHE		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 3000 / Date 03 OCT 2025

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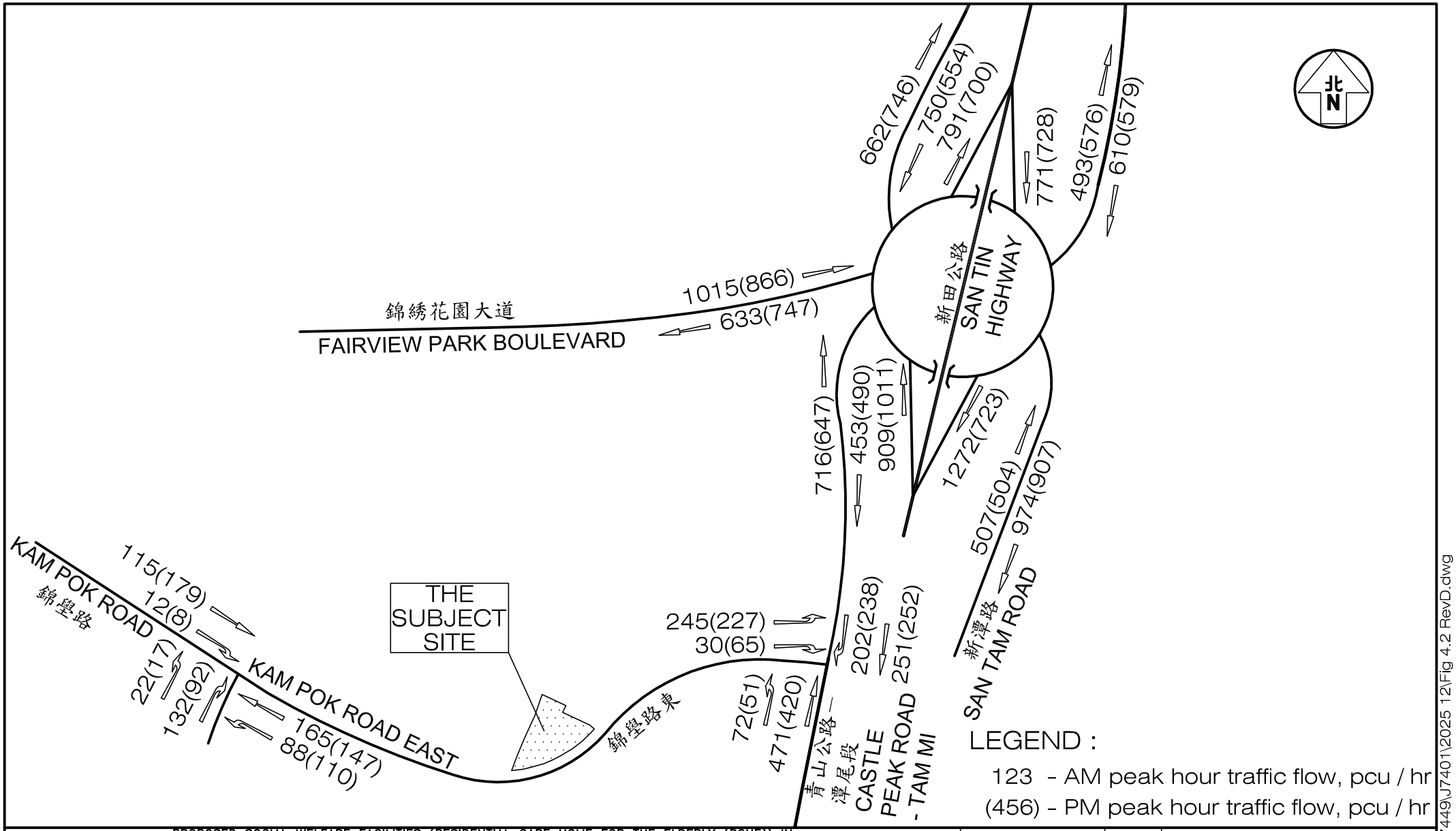

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Figure Title	YEAR 2033 PEAK HOUR TRAFFIC FLOWS WITHOUT THE PROPOSED RCHE		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 N.T.S. / Date 24 DEC 2025

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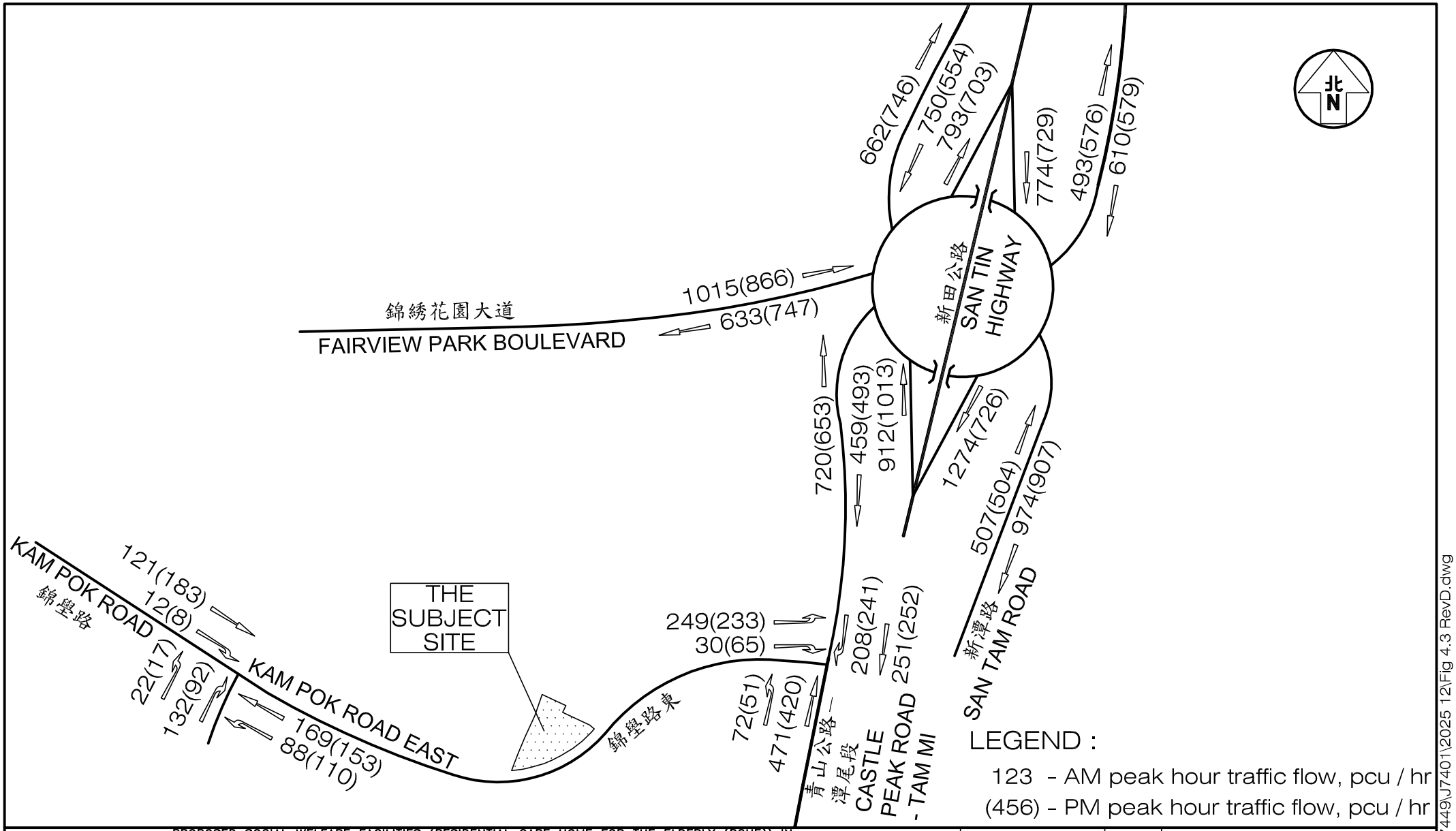

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Figure Title	YEAR 2033 PEAK HOUR TRAFFIC FLOWS WITH THE PROPOSED RCHE		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 N.T.S. / Date 24 DEC 2025

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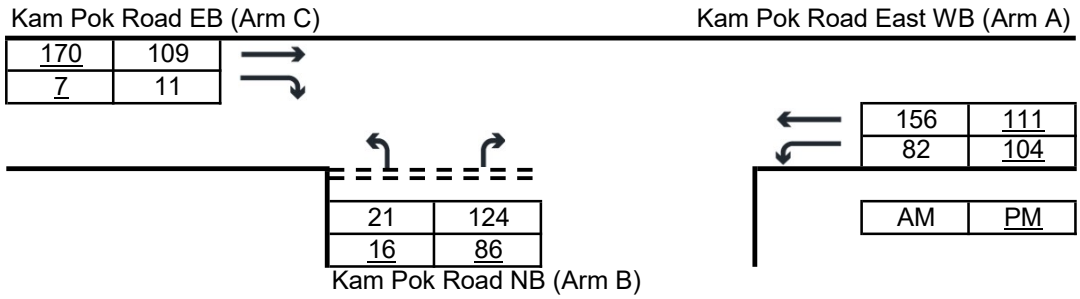
Appendix 1 – Calculation

Priority Junction Analysis

Junction:	Kam Pok Road / Kam Pok Road East				
Design Year:	2025	Job Number:	J7401	Date:	24 Dec 2025
Scenario:	Existing Condition				Page 1



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	10.30	V-rBA	45	w-BA	2.70	D	0.7881
	W-CR	0.00	V-lBA	30	w-BC	2.70	E	0.8492
			V-rBC	45	w-CB	5.00	F	1.0356
			V-rCB	30			Y	0.6447

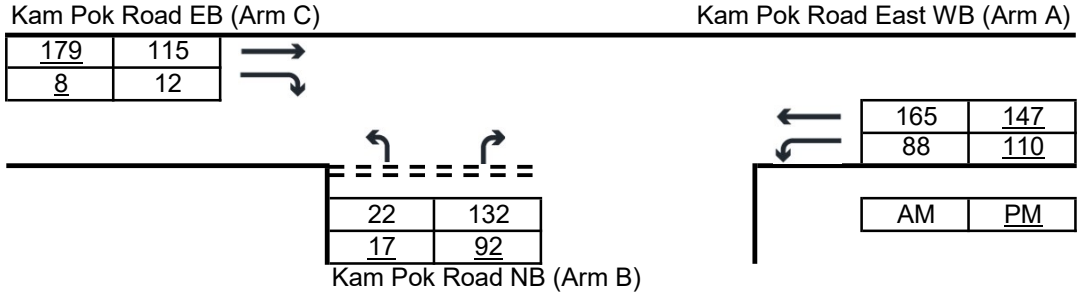
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	109	170	Q-BA	444	444
q-CB	11	7	Q-BC	595	602
q-AB	82	104	Q-CB	714	719
q-AC	156	111	Q-BAC	461	463
q-BA	124	86			
q-BC	21	16			
f	0.145	0.157			

Ratio-of-flow to Capacity	AM	PM
B-A	0.279	0.194
B-C	0.035	0.027
C-B	0.015	0.010
B-AC	0.315	0.220

Priority Junction Analysis

Junction:	Kam Pok Road / Kam Pok Road East				
Design Year:	2033	Job Number:	J7401	Date:	24 Dec 2025
Scenario:	Future Condition (Without Proposed RCHE)			Page	2



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	10.30	V-rBA	45	w-BA	2.70	D	0.7881
	W-CR	0.00	V-lBA	30	w-BC	2.70	E	0.8492
			V-rBC	45	w-CB	5.00	F	1.0356
			V-rCB	30			Y	0.6447

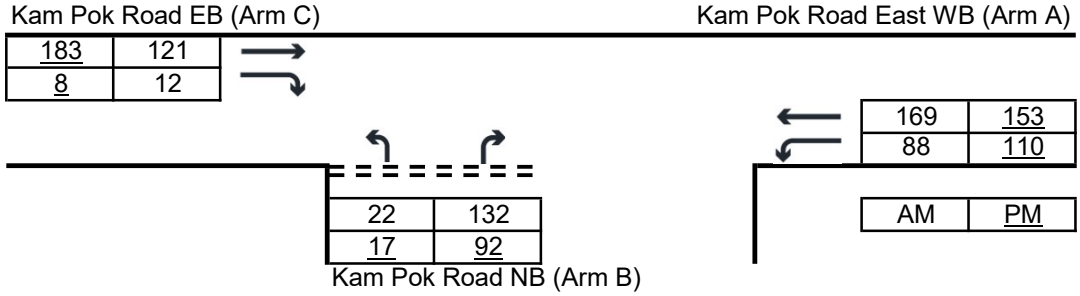
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	115	179	Q-BA	441	436
q-CB	12	8	Q-BC	593	595
q-AB	88	110	Q-CB	710	709
q-AC	165	147	Q-BAC	457	455
q-BA	132	92			
q-BC	22	17			
f	0.143	0.156			

Ratio-of-flow to Capacity	AM	PM
B-A	0.300	0.211
B-C	0.037	0.029
C-B	0.017	0.011
B-AC	0.337	0.240

Priority Junction Analysis

Junction:	Kam Pok Road / Kam Pok Road East				
Design Year:	2033	Job Number:	J7401	Date:	24 Dec 2025
Scenario:	Future Condition (With Proposed RCHE)			Page	3



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	10.30	V-rBA	45	w-BA	2.70	D	0.7881
	W-CR	0.00	V-lBA	30	w-BC	2.70	E	0.8492
			V-rBC	45	w-CB	5.00	F	1.0356
			V-rCB	30			Y	0.6447

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	121	183	Q-BA	439	434
q-CB	12	8	Q-BC	592	594
q-AB	88	110	Q-CB	709	708
q-AC	169	153	Q-BAC	456	453
q-BA	132	92			
q-BC	22	17			
f	0.143	0.156			

Ratio-of-flow to Capacity	AM	PM
B-A	0.301	0.212
B-C	0.037	0.029
C-B	0.017	0.011
B-AC	0.338	0.240

Signal Junction Analysis

Junction: Castle Peak Road - Tam Mi / Kam Pok Road Job Number: J7401

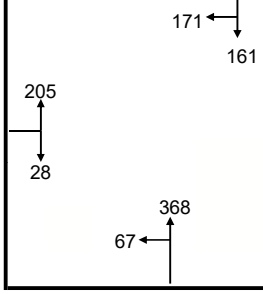
Scenario: Existing Condition P. 4

Design Year: 2025 Designed By: Checked By: Date: 24 Dec 2025

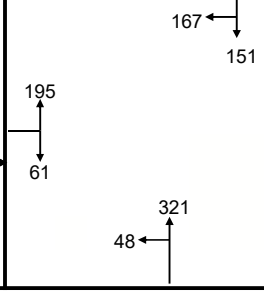
Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road - LT+SA	A1	1	3.50	20.0		15	1943	435	0.224	0.224	13	1946	369	0.190	0.190
Tam Mi NB															
Castle Peak Road - Tam Mi SB SA	B1	2	3.30				2085	161	0.077			2085	151	0.072	
RT	B2	2	3.40	15.0		100	1905	171	0.090	0.090	100	1905	167	0.088	0.088
Kam Pok Road EB LT	C1	3	3.50	28.0		100	1865	205	0.110	0.110	100	1865	195	0.105	0.105
RT	C2	3	3.50	13.0		100	1887	28	0.015		100	1887	61	0.032	

pedestrian phase	D(p)	4		min crossing time =	13	sec GM +	12	sec FGM =	25	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

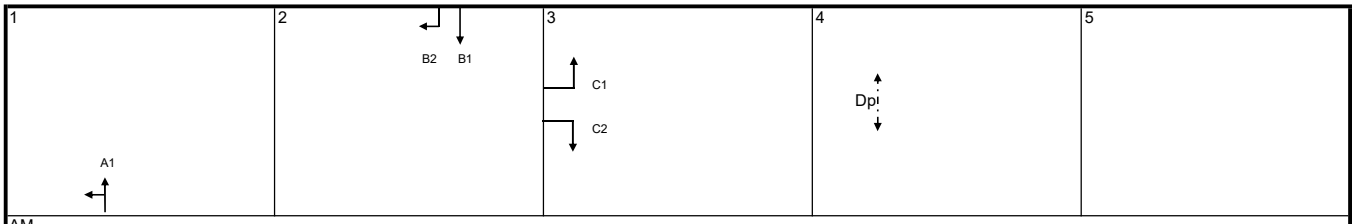


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

Note:

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.424		0.382	
L (s)	40		40	
C (s)	94		94	
practical y	0.517		0.517	
R.C. (%)	22%		35%	



AM																
G =	I/G =	6	G =	I/G =	5	G =	I/G =	5	G =	25	I/G =	2	G =	I/G =		
G =	I/G =		G =	I/G =		G =	I/G =		G =		I/G =		G =	I/G =		
PM																
G =	I/G =	6	G =	I/G =	5	G =	I/G =	5	G =	25	I/G =	2	G =	I/G =		
G =	I/G =		G =	I/G =		G =	I/G =		G =		I/G =		G =	I/G =		

Signal Junction Analysis

Junction: Castle Peak Road - Tam Mi / Kam Pok Road Job Number: J7401

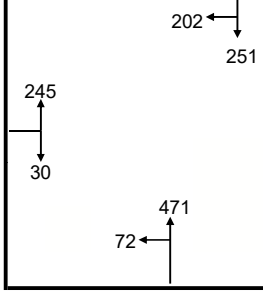
Scenario: Future Condition (Without Proposed RCHE) P. 5

Design Year: 2033 Designed By: Checked By: Date: 24 Dec 2025

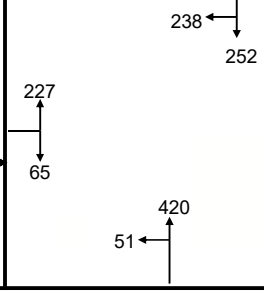
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road - Tam Mi NB	LT+SA	A1	1	3.50	20.0		14	1945	543	0.279	0.279	10	1950	471	0.242	0.242
Castle Peak Road - Tam Mi SB	SA	B1	2	3.30				2085	251	0.120			2085	252	0.121	
	RT	B2	2	3.40	15.0		100	1905	202	0.106	0.106	100	1905	238	0.125	0.125
Kam Pok Road EB	LT	C1	3	3.50	28.0		100	1865	245	0.131	0.131	100	1865	227	0.122	0.122
	RT	C2	3	3.50	13.0		100	1887	30	0.016		100	1887	65	0.034	

pedestrian phase	D(p)	4		min crossing time =	13	sec GM +	12	sec FGM =	25	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

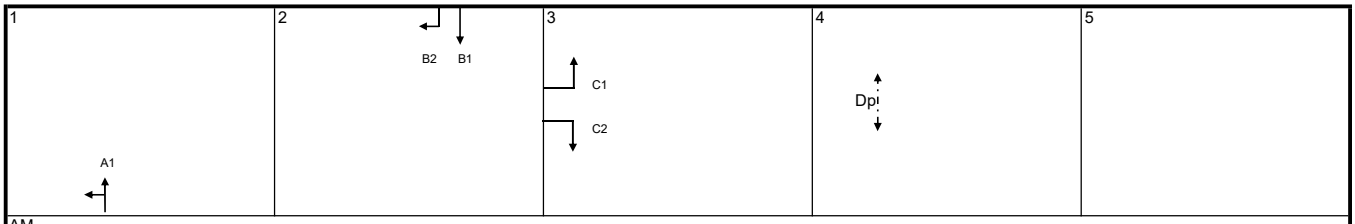


S=1940+100(W–3.25) S=2080+100(W–3.25)

S_M=S÷(1+1.5f/r) S_M=(S–230)÷(1+1.5f/r)

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.517		0.488	
L (s)	40		40	
C (s)	120		120	
practical y	0.600		0.600	
R.C. (%)	16%		23%	

Note:



AM	G =		I/G =	6	G =		I/G =	5	G =		I/G =	5	G =	25	I/G =	2	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		
PM	G =		I/G =	6	G =		I/G =	5	G =		I/G =	5	G =	25	I/G =	2	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		

Signal Junction Analysis

Junction: Castle Peak Road - Tam Mi / Kam Pok Road Job Number: J7401

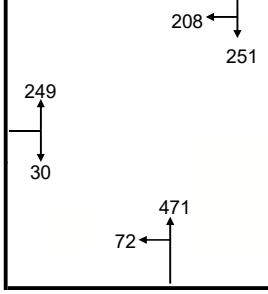
Scenario: Future Condition (With Proposed RCHE) P. 6

Design Year: 2033 Designed By: Checked By: Date: 24 Dec 2025

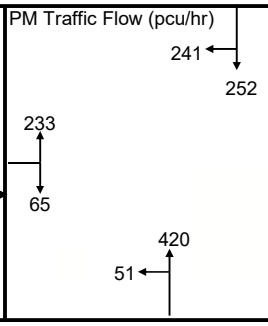
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road - Tam Mi NB	LT+SA	A1	1	3.50	20.0		14	1945	543	0.279	0.279	10	1950	471	0.242	0.242
Castle Peak Road - Tam Mi SB	SA	B1	2	3.30				2085	251	0.120			2085	252	0.121	
	RT	B2	2	3.40	15.0		100	1905	208	0.109	0.109	100	1905	241	0.127	0.127
Kam Pok Road EB	LT	C1	3	3.50	28.0		100	1865	249	0.134	0.134	100	1865	233	0.125	0.125
	RT	C2	3	3.50	13.0		100	1887	30	0.016		100	1887	65	0.034	

pedestrian phase	D(p)	4		min crossing time =	13	sec GM +	12	sec FGM =	25	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

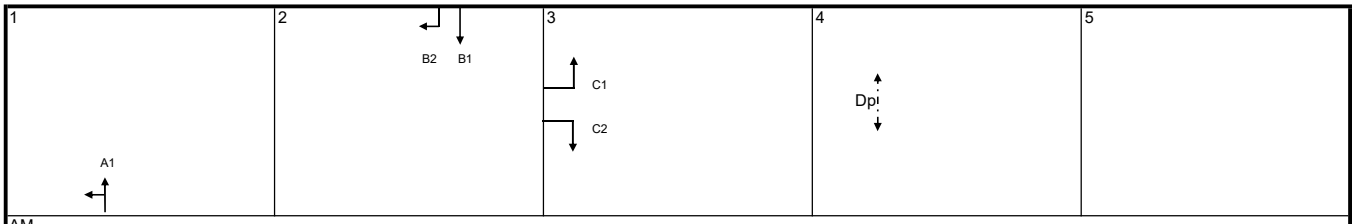


S=1940+100(W–3.25) S=2080+100(W–3.25)

S_M=S÷(1+1.5f/r) S_M=(S–230)÷(1+1.5f/r)

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.522		0.493	
L (s)	40		40	
C (s)	120		120	
practical y	0.600		0.600	
R.C. (%)	15%		22%	

Note:



AM	G =		I/G =	6	G =		I/G =	5	G =		I/G =	5	G =	25	I/G =	2	G =		I/G =	
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	
PM	G =		I/G =	6	G =		I/G =	5	G =		I/G =	5	G =	25	I/G =	2	G =		I/G =	
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	

Roundabout Analysis

Junction: The Fairview Park Roundabout | Job Number: J7401
Scenario: Existing Condition | P. 7
Design Year: 2025 | Designed By: | Checked By: | Date: 24 Dec 2025

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	35	54	379	140	73	122	69	872	1251
From B	30	11	141	32	53	208	98	573	1791
From C	210	42	43	131	144	69	125	764	1393
From D	29	17	73	14	52	120	13	318	1493
From E	63	35	133	110	10	47	32	430	1399
From F	157	87	112	85	25	29	84	579	1211
From G	53	86	90	152	55	23	19	478	1350
Total	577	332	971	664	412	618	440	4014	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	28	54	153	98	96	255	64	748	1164
From B	68	16	77	45	78	112	120	516	1594
From C	228	77	22	142	102	36	133	740	1568
From D	67	17	49	24	64	72	17	310	1608
From E	100	21	129	135	14	38	33	470	1467
From F	126	74	55	148	52	25	111	591	1375
From G	61	59	57	108	45	24	13	367	1475
Total	678	318	542	700	451	562	491	3742	

Legend

Arm	Road (in clockwise order)
A	Fairview Park Boulevard EB
B	Castle Peak Road NB
C	San Tin Road NB
D	San Tam Road NB
E	San Tam Road SB
F	San Tin Road SB
G	Castle Peak Road SB
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.0	22.0	14.0	142	35	0.5
From B	9.0	5.5	20.0	10.0	142	35	0.6
From C	8.5	6.4	23.0	7.5	142	30	0.4
From D	8.5	6.5	20.0	10.0	142	25	0.3
From E	8.0	6.0	20.0	9.5	142	35	0.3
From F	8.5	6.0	25.0	6.5	142	40	0.6
From G	6.0	5.0	22.0	7.0	142	30	0.2
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.09	3640.95	1.00	0.99	2754.13	0.59	1987.75	2039	872	748	0.439	0.367
From B	7.15	3640.95	1.00	0.98	2166.74	0.51	1230.86	1330	573	516	0.466	0.388
From C	7.51	3640.95	1.00	1.01	2274.80	0.53	1552.77	1460	764	740	0.492	0.507
From D	7.72	3640.95	1.00	1.02	2339.01	0.53	1568.05	1506	318	310	0.203	0.206
From E	7.19	3640.95	1.00	0.98	2180.08	0.51	1438.03	1404	430	470	0.299	0.335
From F	7.12	3640.95	1.00	0.98	2157.57	0.51	1502.60	1421	579	591	0.385	0.416
From G	5.69	3640.95	1.00	1.00	1722.94	0.45	1121.91	1066	478	367	0.426	0.344
From H												

Roundabout Analysis

Junction: The Fairview Park Roundabout — Job Number: J7401

Scenario: Future Condition (Without Proposed RCHE) — P. 8

Design Year: 2033 — Designed By: _____ — Checked By: _____ — Date: 24 Dec 2025

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	36	58	444	176	79	148	74	1015	1868
From B	32	12	165	37	57	229	184	716	2430
From C	222	55	55	139	167	75	196	909	1874
From D	51	20	78	15	93	220	30	507	1809
From E	67	36	194	219	11	49	34	610	1823
From F	168	100	120	201	27	32	123	771	1642
From G	57	172	216	187	59	38	21	750	1751
Total	633	453	1272	974	493	791	662	5278	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	30	58	191	130	103	286	68	866	1641
From B	73	17	94	49	83	125	206	647	2017
From C	245	146	36	155	134	42	253	1011	1941
From D	92	20	52	26	137	143	34	504	2045
From E	107	22	170	190	15	40	35	579	1973
From F	134	85	60	228	56	30	135	728	1852
From G	66	142	120	129	48	34	15	554	1834
Total	747	490	723	907	576	700	746	4889	

Legend

Arm	Road (in clockwise order)
A	Fairview Park Boulevard EB
B	Castle Peak Road NB
C	San Tin Road NB
D	San Tam Road NB
E	San Tam Road SB
F	San Tin Road SB
G	Castle Peak Road SB
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.0	22.0	14.0	142	35	0.5
From B	9.0	5.5	20.0	10.0	142	35	0.6
From C	8.5	6.4	23.0	7.5	142	30	0.4
From D	8.5	6.5	20.0	10.0	142	25	0.3
From E	8.0	6.0	20.0	9.5	142	35	0.3
From F	8.5	6.0	25.0	6.5	142	40	0.6
From G	6.0	5.0	22.0	7.0	142	30	0.2
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.09	3640.95	1.00	0.99	2754.13	0.59	1627	1760	1015	866	0.624	0.492
From B	7.15	3640.95	1.00	0.98	2166.74	0.51	910	1118	716	647	0.786	0.579
From C	7.51	3640.95	1.00	1.01	2274.80	0.53	1298	1263	909	1011	0.700	0.800
From D	7.72	3640.95	1.00	1.02	2339.01	0.53	1396	1268	507	504	0.363	0.397
From E	7.19	3640.95	1.00	0.98	2180.08	0.51	1225	1149	610	579	0.498	0.504
From F	7.12	3640.95	1.00	0.98	2157.57	0.51	1289	1184	771	728	0.598	0.615
From G	5.69	3640.95	1.00	1.00	1722.94	0.45	941	904	750	554	0.797	0.613
From H												

Roundabout Analysis

Junction: The Fairview Park Roundabout — Job Number: J7401

Scenario: Future Condition (With Proposed RCHE) — P. 9

Design Year: 2033 — Designed By: _____ — Checked By: _____ — Date: 24 Dec 2025

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	36	58	444	176	79	148	74	1015	1874
From B	32	12	167	37	57	231	184	720	2430
From C	222	58	55	139	167	75	196	912	1876
From D	51	20	78	15	93	220	30	507	1814
From E	67	36	194	219	11	49	34	610	1828
From F	168	103	120	201	27	32	123	774	1645
From G	57	172	216	187	59	38	21	750	1757
Total	633	459	1274	974	493	793	662	5288	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	30	58	191	130	103	286	68	866	1644
From B	73	17	97	49	83	128	206	653	2017
From C	245	148	36	155	134	42	253	1013	1944
From D	92	20	52	26	137	143	34	504	2050
From E	107	22	170	190	15	40	35	579	1978
From F	134	86	60	228	56	30	135	729	1854
From G	66	142	120	129	48	34	15	554	1837
Total	747	493	726	907	576	703	746	4898	

Legend

Arm	Road (in clockwise order)
A	Fairview Park Boulevard EB
B	Castle Peak Road NB
C	San Tin Road NB
D	San Tam Road NB
E	San Tam Road SB
F	San Tin Road SB
G	Castle Peak Road SB
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.0	22.0	14.0	142	35	0.5
From B	9.0	5.5	20.0	10.0	142	35	0.6
From C	8.5	6.4	23.0	7.5	142	30	0.4
From D	8.5	6.5	20.0	10.0	142	25	0.3
From E	8.0	6.0	20.0	9.5	142	35	0.3
From F	8.5	6.0	25.0	6.5	142	40	0.6
From G	6.0	5.0	22.0	7.0	142	30	0.2
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.09	3640.95	1.00	0.99	2754.13	0.59	1624	1758	1015	866	0.625	0.493
From B	7.15	3640.95	1.00	0.98	2166.74	0.51	910	1118	720	653	0.791	0.584
From C	7.51	3640.95	1.00	1.01	2274.80	0.53	1297	1261	912	1013	0.703	0.803
From D	7.72	3640.95	1.00	1.02	2339.01	0.53	1394	1265	507	504	0.364	0.398
From E	7.19	3640.95	1.00	0.98	2180.08	0.51	1222	1147	610	579	0.499	0.505
From F	7.12	3640.95	1.00	0.98	2157.57	0.51	1287	1183	774	729	0.601	0.616
From G	5.69	3640.95	1.00	1.00	1722.94	0.45	938	902	750	554	0.799	0.614
From H												

Appendix 2 –
Swept Path Analysis

APPENDIX 3 – 24-HOUR BREAKDOWN OF TRAFFIC GENERATION

The survey results with detail breakdown of vehicle composition are presented in Tables A and B.

TABLE A TRAFFIC GENERATED BY CARITAS LI KA SHING CARE AND ATTENTION HOME

Period	Vehicle Type (veh/hr)				Traffic generation	
	Car	Taxi	LGV	Rehabus / Ambulance	veh/hr	pcu/hr
In						
08:00-08:59	0	4	1	0	5	6
09:00-09:59	5	3	1	1	10	12
10:00-10:59	0	4	0	0	4	4
11:00-11:59	1	2	0	1	4	5
12:00-12:59	0	5	0	0	5	5
13:00-13:59	0	2	0	1	3	4
14:00-14:59	3	1	0	0	4	4
15:00-15:59	2	1	1	1	5	7
16:00-16:59	1	4	0	1	6	7
17:00-17:59	0	1	0	0	1	1
18:00-18:59	0	2	0	0	2	2
19:00-19:59	0	1	0	0	1	1
Out						
08:00-08:59	0	4	1	0	5	6
09:00-09:59	3	3	0	1	7	8
10:00-10:59	0	4	1	0	5	6
11:00-11:59	1	2	0	1	4	5
12:00-12:59	0	5	0	0	5	5
13:00-13:59	0	2	0	1	3	4
14:00-14:59	1	1	0	0	2	2
15:00-15:59	1	0	0	0	1	1
16:00-16:59	4	5	1	1	11	13
17:00-17:59	1	1	0	1	3	4
18:00-18:59	1	1	0	0	2	2
19:00-19:59	0	2	0	0	2	2

TABLE B TRIP RATE OF CARITAS LI KA SHING CARE AND ATTENTION HOME

Period	Vehicle Type (veh/hr/bed)				Trip Rate (pcu/hr/bed)
	Car	Taxi	LGV	Rehabus / Ambulance	
In					
08:00-08:59	0.0000	0.0154	0.0038	0.0000	0.0231
09:00-09:59	0.0192	0.0115	0.0038	0.0038	0.0462
10:00-10:59	0.0000	0.0154	0.0000	0.0000	0.0154
11:00-11:59	0.0038	0.0077	0.0000	0.0038	0.0192
12:00-12:59	0.0000	0.0192	0.0000	0.0000	0.0192
13:00-13:59	0.0000	0.0077	0.0000	0.0038	0.0154
14:00-14:59	0.0115	0.0038	0.0000	0.0000	0.0154
15:00-15:59	0.0077	0.0038	0.0038	0.0038	0.0269
16:00-16:59	0.0038	0.0154	0.0000	0.0038	0.0269
17:00-17:59	0.0000	0.0038	0.0000	0.0000	0.0038
18:00-18:59	0.0000	0.0077	0.0000	0.0000	0.0077
19:00-19:59	0.0000	0.0038	0.0000	0.0000	0.0038
Out					
08:00-08:59	0.0000	0.0154	0.0038	0.0000	0.0231
09:00-09:59	0.0115	0.0115	0.0000	0.0038	0.0308
10:00-10:59	0.0000	0.0154	0.0038	0.0000	0.0231
11:00-11:59	0.0038	0.0077	0.0000	0.0038	0.0192
12:00-12:59	0.0000	0.0192	0.0000	0.0000	0.0192
13:00-13:59	0.0000	0.0077	0.0000	0.0038	0.0154
14:00-14:59	0.0038	0.0038	0.0000	0.0000	0.0077
15:00-15:59	0.0038	0.0000	0.0000	0.0000	0.0038
16:00-16:59	0.0154	0.0154	0.0038	0.0038	0.0500
17:00-17:59	0.0038	0.0038	0.0000	0.0038	0.0154
18:00-18:59	0.0038	0.0038	0.0000	0.0000	0.0077
19:00-19:59	0.0000	0.0077	0.0000	0.0000	0.0077

Based on result in Table B, the estimated 24-hour breakdown of traffic generation of the Proposed RCHD is shown in Table C.

TABLE C 24-HOUR BREAKDOWN OF TRAFFIC GENEATION OF THE PROPOSED RCHE

Period	Vehicle Type				Traffic generation	
	Car	Taxi	LGV	Rehabus / Ambulance	veh/hr	pcu/hr
In						
08:00-08:59	0	4	1	0	5	6
09:00-09:59	5	3	1	1	10	12
10:00-10:59	0	4	0	0	4	4
11:00-11:59	1	2	0	1	4	5
12:00-12:59	0	5	0	0	5	5
13:00-13:59	0	2	0	1	3	4
14:00-14:59	3	1	0	0	4	4
15:00-15:59	2	1	1	1	5	7
16:00-16:59	1	4	0	1	6	7
17:00-17:59	0	1	0	0	1	1
18:00-18:59	0	2	0	0	2	2
19:00-19:59	0	1	0	0	1	1
20:00-07:59	Ambulance in the event of need					
Out						
08:00-08:59	0	4	1	0	5	6
09:00-09:59	3	3	0	1	7	8
10:00-10:59	0	4	1	0	5	6
11:00-11:59	1	2	0	1	4	5
12:00-12:59	0	5	0	0	5	5
13:00-13:59	0	2	0	1	3	4
14:00-14:59	1	1	0	0	2	2
15:00-15:59	1	0	0	0	1	1
16:00-16:59	4	4	1	1	10	12
17:00-17:59	1	1	0	1	3	4
18:00-18:59	1	1	0	0	2	2
19:00-19:59	0	2	0	0	2	2
20:00-07:59	Ambulance in the event of need					

Appendix 3 –
24-hour breakdown of traffic generation

Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP1 / Revision C
Figure Title	SWEPT PATH OF LIGHT BUS ENTERING AND LEAVING THE LIGHT BUS / AMBULANCE PARKING SPACE ON G/F		Designed by L C H / Drawn by N C M / Checked by K C; Scale in A4 1 : 250 / Date 03 OCT 2025

CKM Asia Limited
Traffic and Transportation Planning Consultants

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Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP2	Revision C
Figure Title	SWEPT PATH OF AMBULANCE ENTERING AND LEAVING THE LIGHT BUS / AMBULANCE PARKING SPACE ON G/F		Designed by L C H / Drawn by N C M / Checked by K C	
			Scale in A4 1 : 250 / Date 03 OCT 2025	

CKM Asia Limited
Traffic and Transportation Planning Consultants

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Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP3	Revision C
Figure Title	SWEPT PATH OF LGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY ON G/F		Designed by L C H / Drawn by N C M / Checked by K C	
			Scale in A4 1 : 250 / Date 03 OCT 2025	

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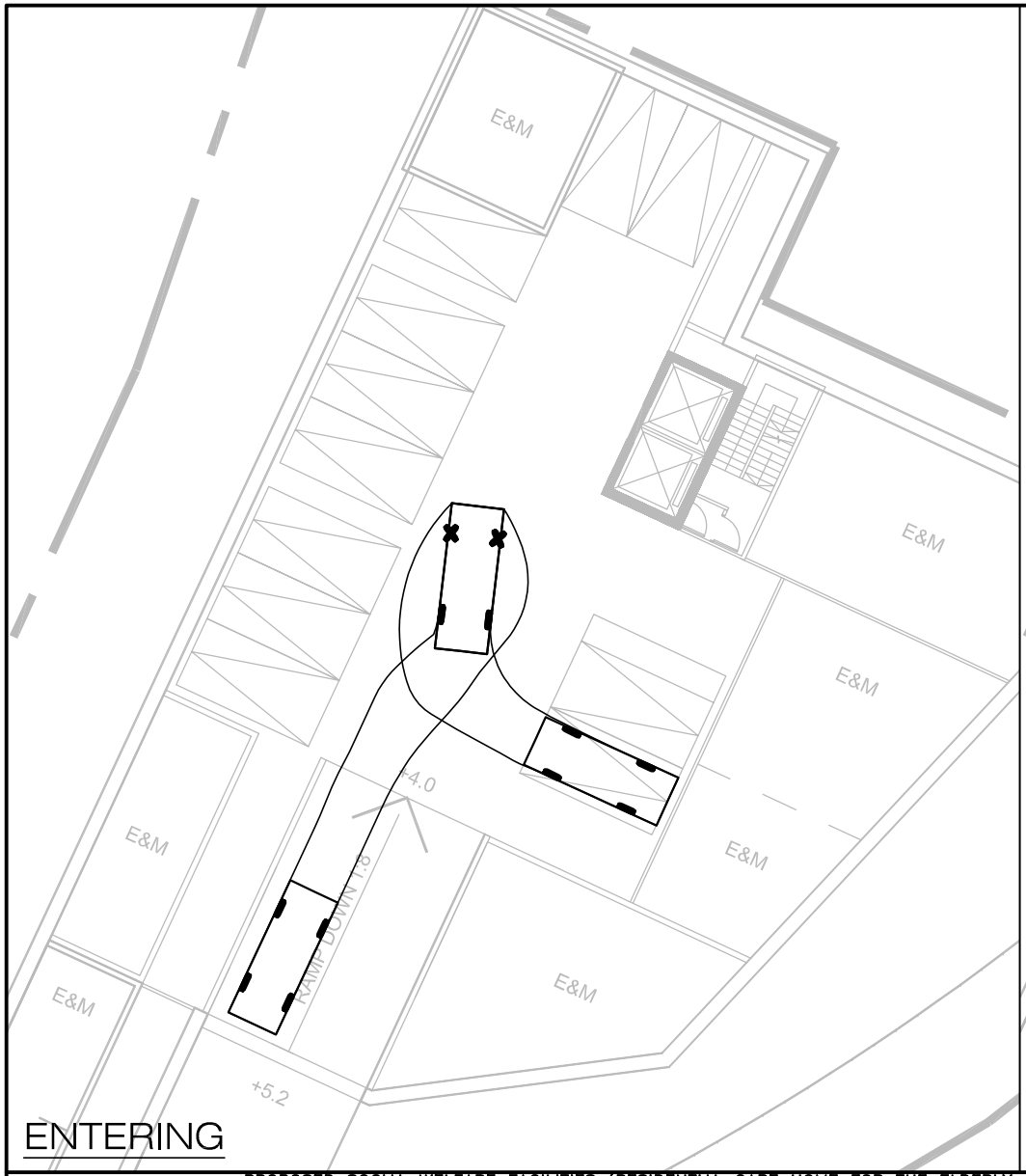

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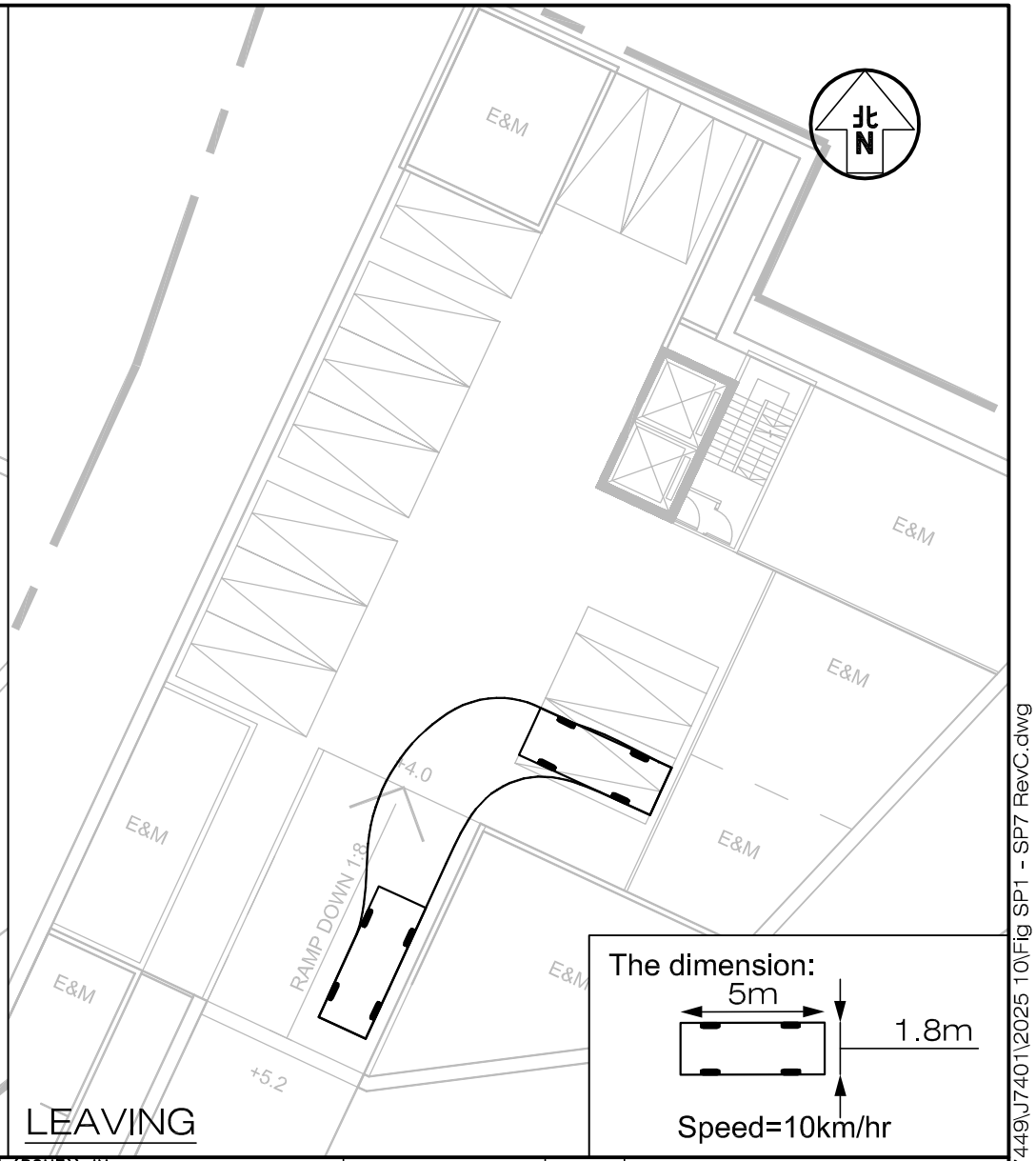

LEAVING

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Speed=10km/hr

Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP4 / Revision C
Figure Title	SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON B/F		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 03 OCT 2025

CKM Asia Limited
Traffic and Transportation Planning Consultants

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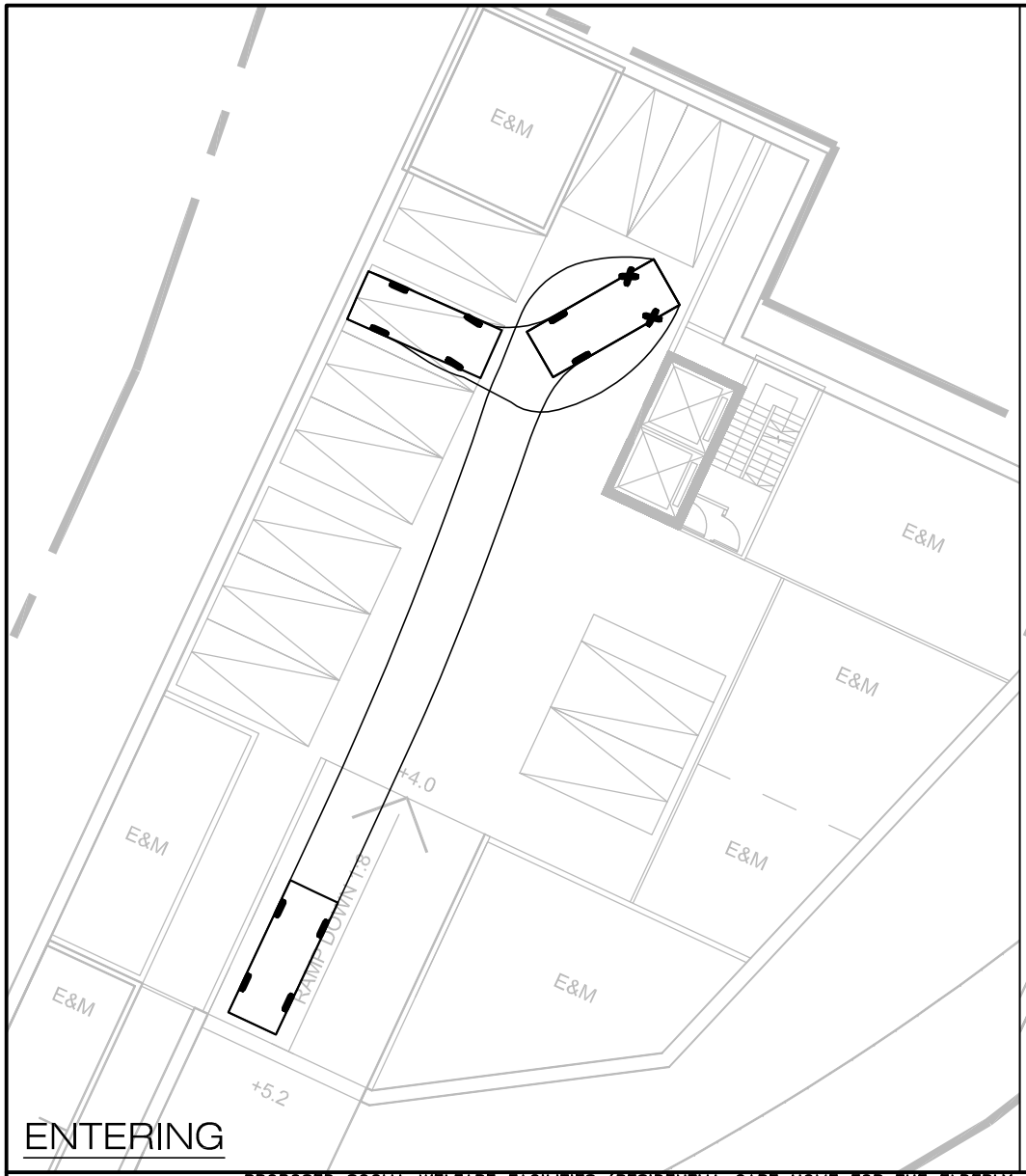

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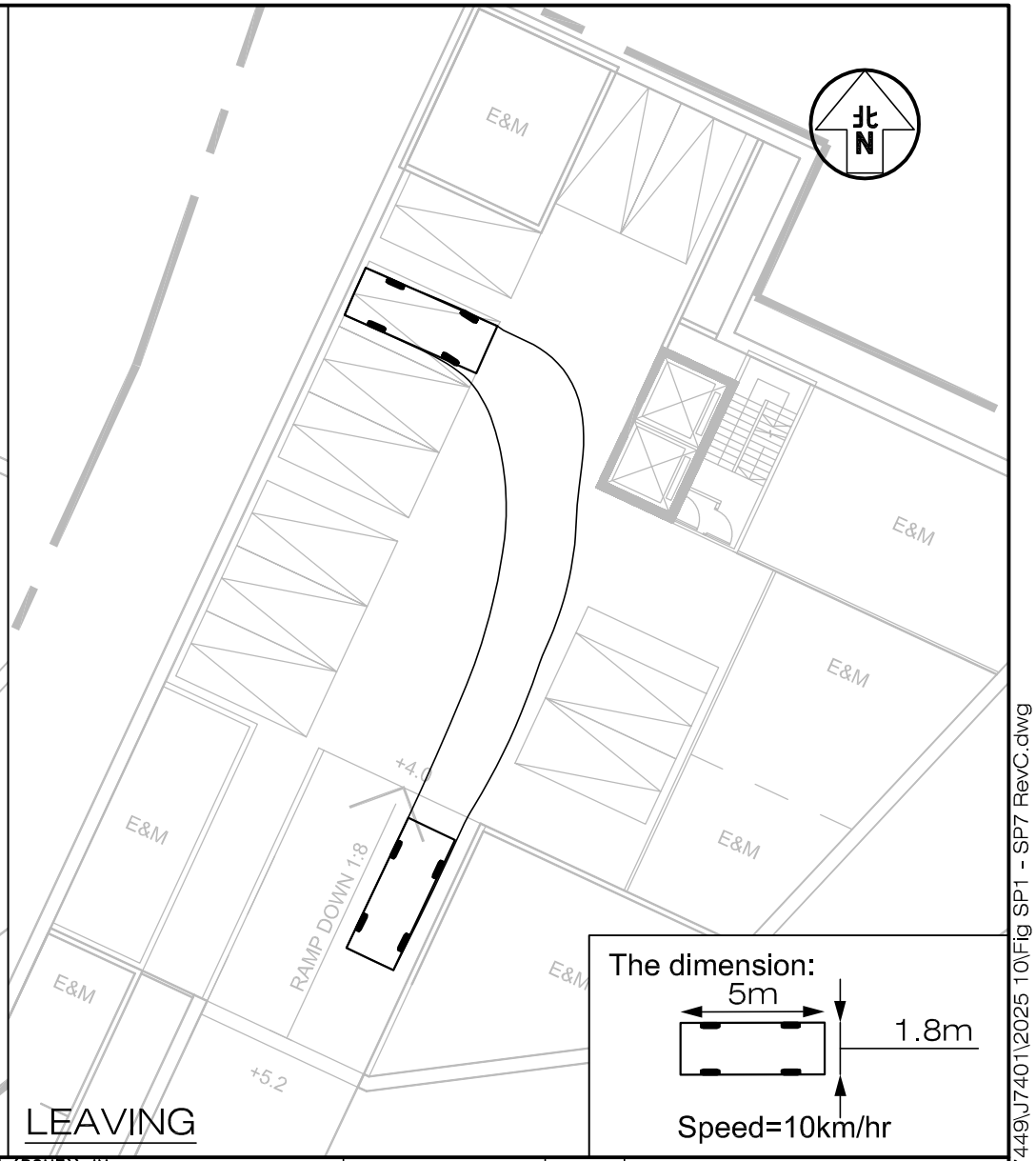

LEAVING

The dimension:

Speed=10km/hr

Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP5 / Revision C
Figure Title	SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON B/F		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 03 OCT 2025

CKM Asia Limited
Traffic and Transportation Planning Consultants

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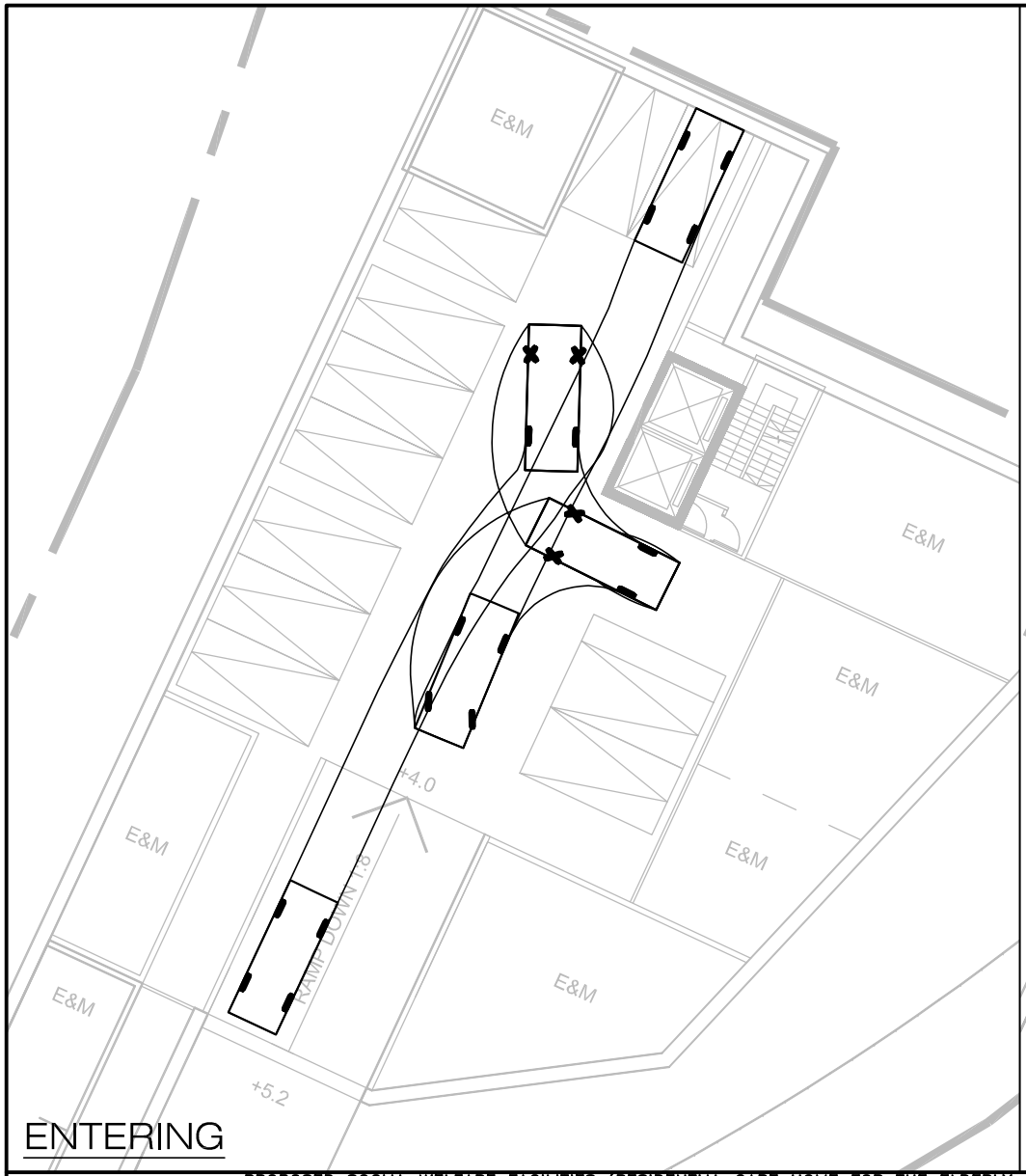

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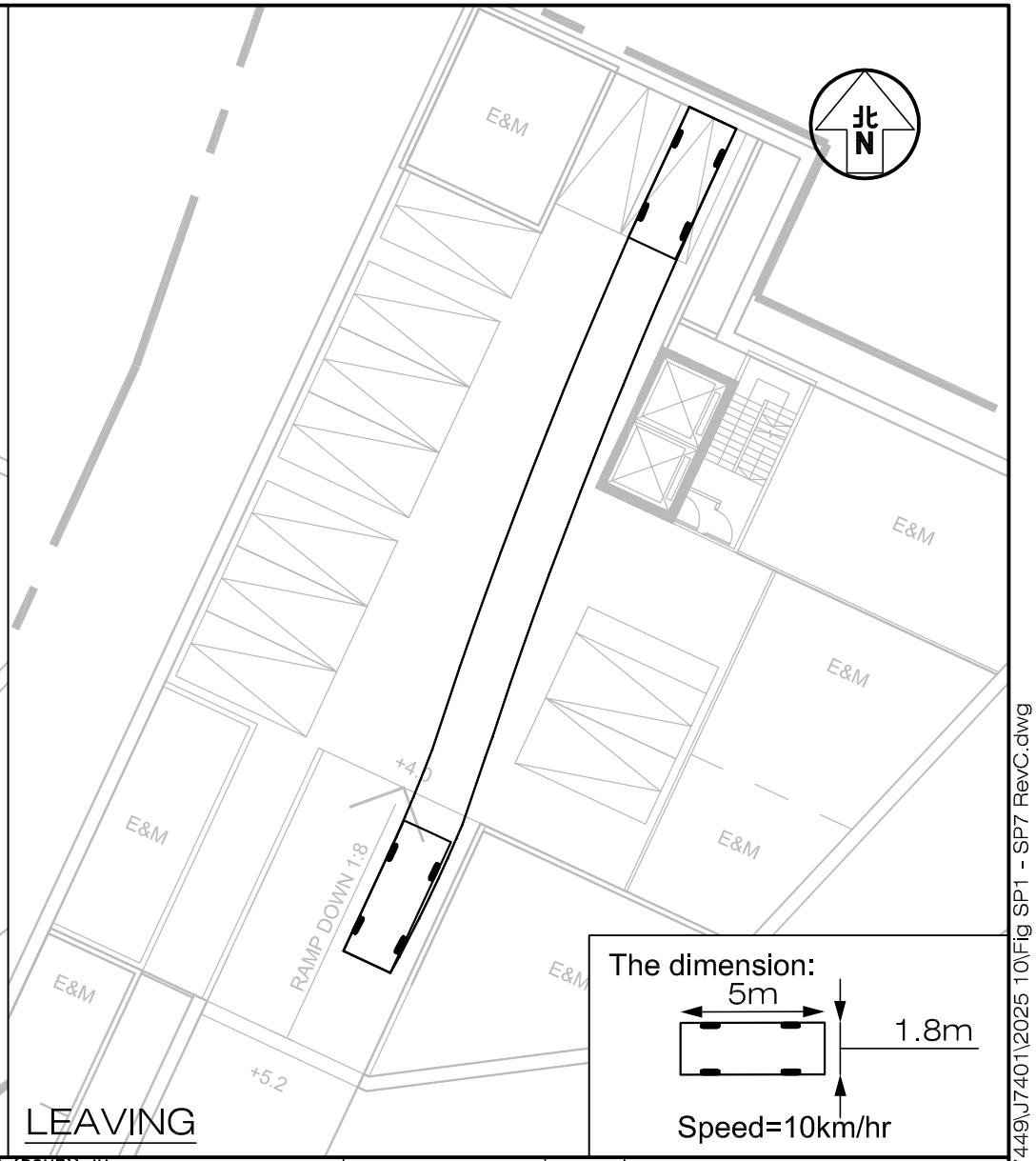

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The dimension:

Speed=10km/hr

Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP6 / Revision C
Figure Title	SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON B/F		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 03 OCT 2025

CKM Asia Limited
Traffic and Transportation Planning Consultants

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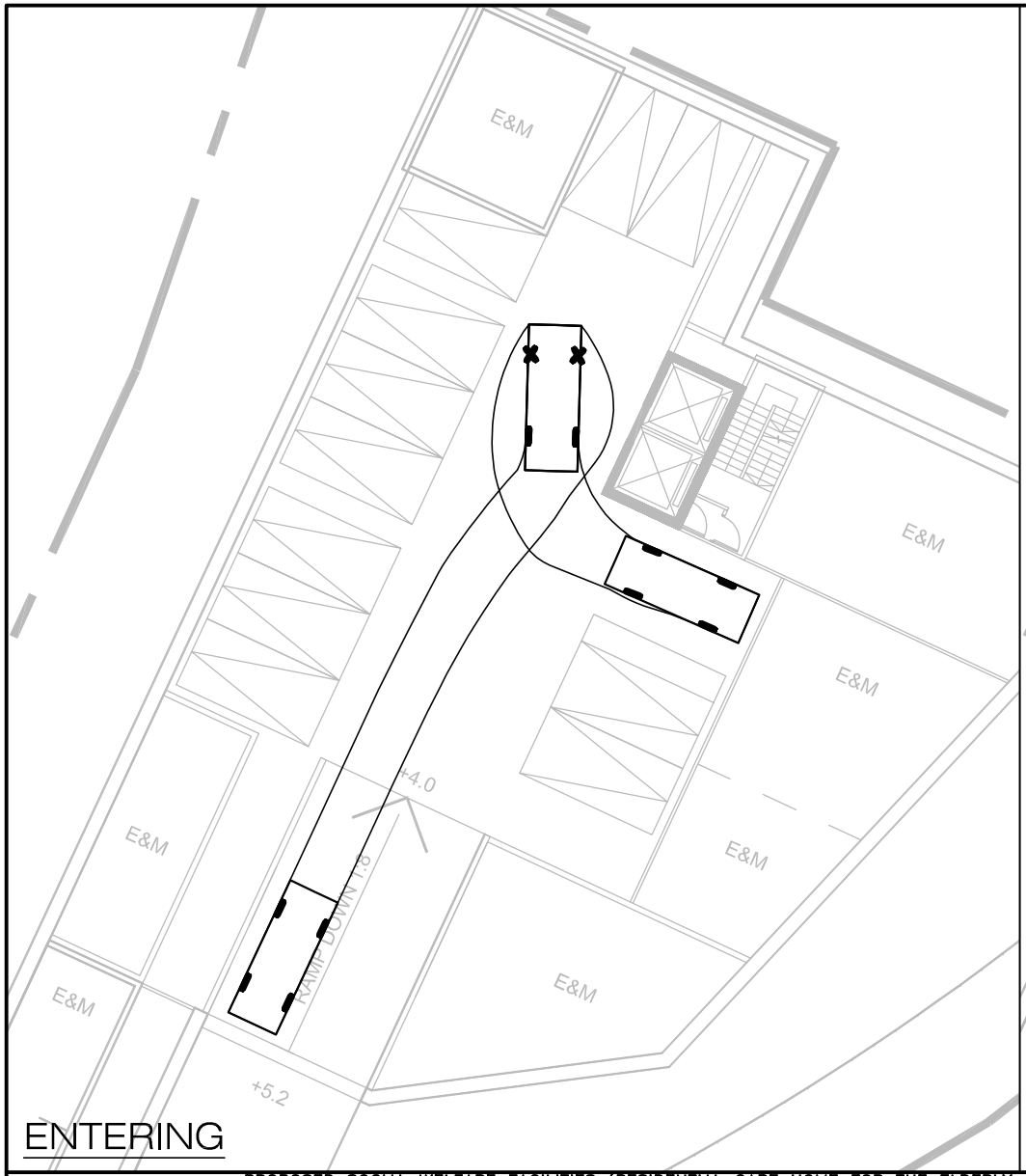

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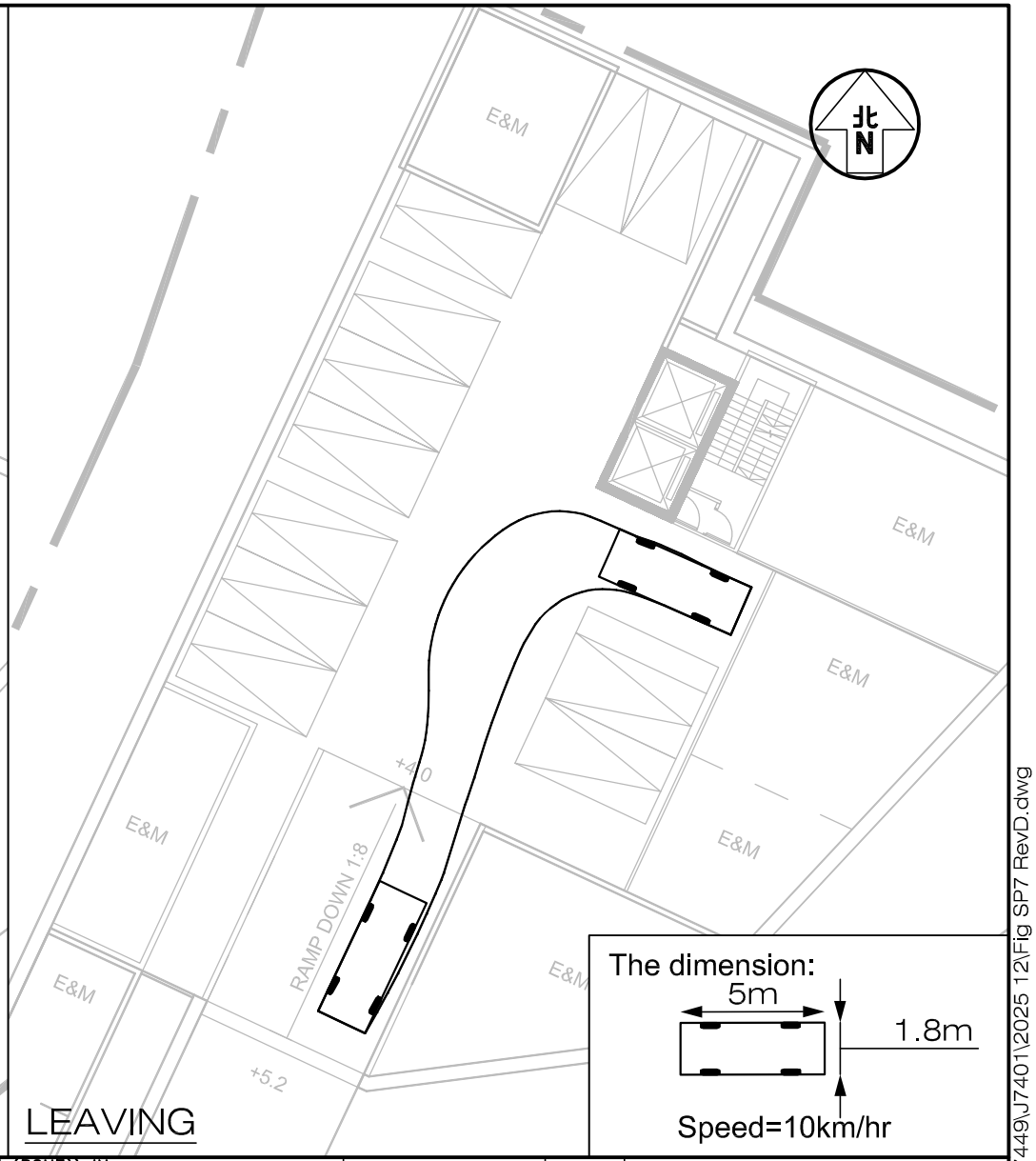

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Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP7 / Revision D
Figure Title	SWEPT PATH OF TAXI ENTERING AND LEAVING THE SUBJECT SITE		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 24 DEC 2025

CKM Asia Limited
Traffic and Transportation Planning Consultants

[redacted]

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From: Jeffrey Kwok DeSPACE <[redacted]>
Sent: Wednesday, December 17, 2025 12:16 PM
To: CKM Asia
Subject: Fwd: [DPO Comment on TIA Table 4.3] [FI3] Planning Application A/YL-NSW/348&349

Dear Tommy,

Please find forwarded reply from PlanD for your information. Thanks.

Should you have any queries, please contact me at [redacted].

Regards,
Jeffrey Kwok
[redacted]

---------- Forwarded message ---------
From: **Thomas Ho Lun LAU/PLAND** <thllau@pland.gov.hk>
Date: Wed, 17 Dec 2025 at 12:14
Subject: [DPO Comment on TIA Table 4.3] [FI3] Planning Application A/YL-NSW/348&349
To: [redacted]
Cc: Ajyum Distinction CHAN/PLAND <adchan@pland.gov.hk>, Athena Pui Yin LAI/PLAND <apylai@pland.gov.hk>, Yen PY LEUNG/PLAND <pyleung@pland.gov.hk>

Dear Jeffrey,

I refer to the Table 4.3 of your TIA of A/YL-NSW/348&349 and the AOI you provided dated 4.12.2025. Please find our comments on the planned development below for your reference.

Ngau Tam Mei/ San Tin OZP

- Please note that application No. A/YL-NTM/178 currently falls within the approved San Tin Technopole Outline Zoning Plan No. S/STT/2, and is within the project boundary of the development of the San Tin Technopole (the Technopole). The applicant should consider if this item is still relevant. In addition, as the AOI provided by the applicant encroaches into the project boundary of the Technopole, we defer to the applicant/relevant Government department(s) to consider if the development of the Technopole should be taken into account;

- Apart from the Technopole, the applicant may also consider whether the Ngau Tam Mei New Development Area should be taken into account when preparing the TIA; and

- The applicant may consider including the proposed social welfare facility (residential care homes for the elderly) at Lot 4823 in D. D. 104, Ngau Tam Mei, which was approved by the RNTPC on 8.12.2023 under planning application No. Y/YL-NTM/9 and has been reflected on the Ngau Tam Mei Outline Zoning Plan. The applicant may refer to RNTPC Paper No. Y/YL-NTM/9A for details.

Kam Tin North OZP

- Please also include a private residential development under approved s.16 application No. A/YL-KTN/604; and

- Please also include the planned Sha Po Public Housing Development (for details, please refer to https://www.tpb.gov.hk/en/uploads/TPB/general/S_YL-KTN_10_MainPaper.pdf).

Mai Po OZP

- Item 2 of the table – please take into account the latest agreed s.12A application No. Y/YL-MP/10 at the site instead;

- Item 3 of the table – please take into account the latest agreed s.12A application No. Y/YL-MP/9 at the site instead; and

- Item 6 of the table – please remove s.16 application No. A/YL-MP/247.

Nam Sang Wai OZP

- Please review and consider revising the development parameters of A/YL-NSW/274;

- Please also include approved s.12A applications No. Y/YL-NSW/7, Y/YL-NSW/8, Y/YL-NSW/9 into the list (for details, please refer to https://www.tpb.gov.hk/en/uploads/RNTPC/paper/S_YL_NSW_8_MainPaper.pdf and https://www.tpb.gov.hk/uploads/page/meetings/20250815/S_YL-NSW_10_MainPaper.pdf); and

- Please replace s.12A application No. Y/YL-NSW/4 with the planned Land Share Pilot Scheme (LSPS) development, of which amendments to the OZP have already been reflected as "R(A)1" and "R(A)2" zones on the OZP in 2024 (for details of the LSPS development, please refer to https://www.tpb.gov.hk/en/uploads/RNTPC/paper/S_YL_NSW_8_MainPaper.pdf).

Thanks and Regards,

Thomas LAU

FS&YLE DPO

Appendix 2

Revised Environmental Assessment (EA)

PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG

ENVIRONMENTAL ASSESSMENT

26 Jan 2026

Report No.: RT25285-EA-01E

Prepared By:

BeeXergy Consulting Limited (BXG)

[redacted]

Project:	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG ENVIRONMENTAL ASSESSMENT
Report No.:	RT25285-EA-01E

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- This report is prepared and submitted by BeeXergy Consulting Limited with all reasonable skill to the best of our knowledge, incorporating our Terms and Conditions and taking account of the resources devoted to it by agreement with the client.
- We disclaim any responsibility to the client and others in respect of any matters outside the project scope.
- This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.

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1. INTRODUCTION

1.1. BACKGROUND

1.1.1. The Project Proponent proposes to develop a 3-storey Residential Care Home for the Elderly (RCHE in various lots in D.D. 104, Nam Sang Wai (hereafter called "the Proposed Development").

1.1.2. BeeXergy Consulting Limited was commissioned by DeSPACE (International) Limited (the Project Planner) to undertake an Environmental Assessment (EA) in support of its planning application under Section 16 of the Town Planning Ordinance (TPO) for the Proposed Development.

1.2. PROJECT LOCATION

1.2.1. The Project Site is approximately 1845m^2, currently bounded by abanoned fishponds to the north and west, Kam Pok Road East to the south. The Project Site is currently zoned as "Village Type Development" ("V") under the Approved Nam Sang Wai Outline Zoning Plan No. S/YL-NSW/10. **Figure 1.1** shows the location of Project Site and its environs.

1.3. PROJECT DESCRIPTION

1.3.1. The Proposed Development will comprise one 3-storey building (excluding carpark) comprising RCHE dormitory and communal area. The key development parameters are summarised in **Table 1.1** and the Master Layout Plan is enclosed in **Appendix 1.1**.

Table 1.1 Key Development Parameters of the Proposed Development

No. of Storeys	3 storeys
Total Gross Floor Area (GFA)	Approx. 4,243.5m^2
Building Height	+20.00 mPD
Proposed Major Floor Use	LG/F: Carpark G/F to 2/F: Dormitory for RCHE(s), Communal Area, Carpark Entrance and Lay-by
Tentative Population Intake Year	2030
Total No. of Beds	208

1.4. SCOPE OF THE ENVIRONMENTAL ASSESSMENT

1.4.1. This EA Report covers the following key issues arising from the construction and operation of the Proposed Scheme:

- Air Quality Impact;
- Noise Impact;
- Water Quality Impact;
- Waste Management; and
- Land Contamination;

1.5. STRUCTURE OF THE REPORT

1.5.1. This EA Report includes the following sections:

- Section 1 introduces the project background and outlines the scope of this EA;
- Section 2 evaluates the air quality impact;
- Section 3 presents the noise impact assessment;
- Section 4 evaluates the water quality impact;
- Section 5 evaluates the waste management implications;
- Section 6 presents the land contamination review; and
- Section 7 summarizes the findings of this EA study.

2. AIR QUALITY IMPACT

2.1. INTRODUCTION

2.1.1. This section identifies the potential air quality impact associated with the construction and operation of the Proposed Scheme. It also recommends practical pollution control and mitigation measures, where necessary.

2.2. RELEVANT LEGISLATION, STANDARDS AND GUIDELINES

2.2.1. The relevant legislation, standards and guidelines applicable to the present review of air quality impact include:

- Air Pollution Control Ordinance (APCO) (Cap. 311);
- Air Pollution Control (Smoke) Regulations (Cap. 311C);
- Air Pollution Control (Fuel Restriction) Regulations (Cap. 311I);
- Air Pollution Control (Construction Dust) Regulation (Cap. 311R);
- Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (Cap. 311Z);
- Hong Kong Planning Standards and Guidelines (HKPSG); and
- EPD's Guidelines on "Control of Oily Fume and Cooking Odour from Restaurants and Food Business".

Air Quality Objectives

2.2.2. The APCO provides a statutory framework for establishing the Air Quality Objectives (AQOs) and stipulating the anti-pollution requirements for air pollution sources. The AQOs stipulate concentration for a range of pollutants, which are summarized below in **Table 2.1**.

Table 2.1 Hong Kong Air Quality Objectives

Pollutant	Averaging Time	Concentration Limit [i] ($\mu g/m^3$)	Number of Exceedances Allowed
Sulphur Dioxide (SO_2)	10-minute	500	3
	24-hour	40	3
Respirable Suspended Particulates (PM_{10}) [ii]	24-hour	75	9
	Annual	30	N/A
Fine Suspended Particulates ($PM_{2.5}$) [iii]	24-hour	37.5	18
	Annual	15	N/A

Pollutant	Averaging Time	Concentration Limit [i] ($\mu g/m^3$)	Number of Exceedances Allowed
Nitrogen Dioxide (NO_2)	1-hour	200	18
	24-hour	120	9
	Annual	40	N/A
Ozone (O_3)	8-hour	160	9
	Peak season	100	N/A
Carbon Monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
	24-hour	4,000	0
Lead	Annual	0.5	N/A

Notes:

[i] All measurements of the concentration of gaseous air pollutants, i.e., SO_2, NO_2, O_3 and CO, are to be adjusted to a reference temperature of 293 K and a reference pressure of 101.325 kPa.

[ii] PM_{10} means suspended particles in air with a nominal aerodynamic diameter of 10μm or less.

[iii] $PM_{2.5}$ means suspended particles in air with a nominal aerodynamic diameter of 2.5μm or less.

Hong Kong Planning Standards and Guidelines

2.2.3. Environmental requirements to be considered in land use planning are outlined in Chapter 9 of the HKPSG. The standards and guidelines provide recommendation on suitable locations for developments and sensitive users, provision of environmental facilities and design, layout, phasing and operational controls to minimize adverse environmental impacts. It also lists out environmental factors influencing the land use planning and recommends buffer distances for land uses.

2.2.4. Buffer distances on usage of open space site for recreational uses are also recommended. Evaluation of potential air quality impact on the Proposed Scheme due to the vehicular emissions and industrial emissions shall make reference to the guidelines as stipulated in the HKPSG. The buffer distance requirements in HKPSG are extracted below in **Table 2.2**.

Table 2.2 HKPSG Recommended Buffer Distance

Pollution Source	Parameter	Buffer Distance	Permitted Uses
Roads and Highways	*Type of Road*		
	Trunk Road and Primary Distributor	> 20m	Active and Passive Recreational Uses
		3 – 20m	Passive Recreational Uses
		< 3m	Amenity Areas
	District Distributor	> 10m	Active and Passive Recreational Uses
Roads and Highways	District Distributor	< 10m	Passive Recreational Uses
	Local Distributor	> 5m	Active and Passive Recreational Uses
		< 5m	Passive Recreational Uses
	Under Flyover	N/A	Passive Recreational Uses
Industrial Areas	*Difference in Height between Industrial Chimney Exit and the Site*		
	< 20m	> 200m	Active and Passive Recreational Uses
		5 – 200m	Passive Recreational Uses
	20 – 30m (*)	> 100m	Active and Passive Recreational Uses
		5 – 100m	Passive Recreational Uses
	30 – 40m	> 50m	Active and Passive Recreational Uses
		5 – 50m	Passive Recreational Uses
	> 40m	> 10m	Active and Passive Recreational Uses

Remarks:

a) In situations where the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purpose and refine as and when more information is available.

b) The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.

c) The guidelines are generally applicable to major industrial areas but not individual large industrial establishments which are likely to be significant air pollution sources. Consult EPD when planning open space sites close to such establishments.

d) Amenity areas are permitted in any situation.

2.3. AIR SENSITIVE RECEIVERS

2.3.1. Representative air sensitive receivers (ASRs) within 500m assessment area have been identified based on topographic maps supplemented by site surveys, outline zoning plans and other published plans in the vicinity of the Project Site. Within the 500m assessment area, ASRs that are closest to the Project Site are anticipated to be the most affected and therefore considered the most representative ASRs for the worst-case scenario air quality impact assessment, whilst other ASRs located further away from these first-tier representative ASRs are expected to be less impacted. Details of the identified representative ASRs are summarized in **Table 2.3** below and their locations are shown in **Figure 2.1**.

Table 2.3 Representative Air Sensitive Receivers

ASR ID	Description	Use	Existing/ Planned	Approximate Shortest Distance from Project Site, m
A01	Merry Garden	Residential	Existing	90
A02	Meister House	Residential	Existing	256
A03	Man Yuen Chun	Residential	Existing	265
A04	Planned Residential Development	Residential	Planned	27
A05	JAC Auto Repair Shop	Workshop	Existing	249
A06	FUSO Fairview Park Service Center	Workshop	Existing	239
A07	Hung Kee Metal Recycling Int'l Ltd.	Workshop	Existing	154
A08	Dorfield Ltd.	Workshop	Existing	206
A09	Prospera Villa	Residential	Existing	45

2.4. CONSTRUCTION PHASE IMPACT REVIEW

Impact Identification and Evaluation

2.4.1. Major construction activities include construction works for site set up, foundation, excavation, superstructure and fitting out, etc of the new building. Potential fugitive dust emission and gaseous emissions from construction machinery arising from these construction activities is anticipated.

2.4.2. Based on the latest development scheme and information provided by Project Team, deep foundation excavation and large-scale site formation will not be required. From the information available, the construction works will tentatively be commenced no later than 2028 with total construction period of 15 months, the tentative construction period

of each construction stage are presented in **Table 2.4**. The area of excavation is approximately 1845m^2, it is expected that only 1 dump truck per day is required. The estimated amount of excavated materials to be handled and number of truck trips per day are summarized in **Table 2.4** below.

Table 2.4 Estimated Volume of Excavated Materials and Number of Truck Trips Per Day

Construction Stage	Estimated Total Volume of Excavated / Backfill Material during the Construction Stage	Estimated Number of Truck Trips per Day
Foundation Stage (~5 Months)	832m^3 C&D Material (Inert C&D: 830m^3, Non-inert C&D: 1.5m^3)	<1 Trip per Day
Superstructure Stage (~10 Months)	424m^3 C&D Material (Inert C&D: 339m^3, Non-inert C&D: 85m^3)	<1 Trip per Day

Remarks:

a) Assumed that there will be 22 working days per month.

b) Assumed that the average dump truck capacity will be 7.5m^3 per trip.

2.4.3. In addition, there would be on average 3 nos. of Powered Mechanical Equipment (PME) operated simultaneously within the Project Site. Gaseous emissions from PMEs are expected to be limited. Provided that the Air Pollution Control (Fuel Restriction) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Motor Vehicle Idling (Fixed Penalty) Ordinance shall be followed, no adverse air quality impacts associated with gaseous emission from construction is anticipated.

2.4.4. With the implementation of appropriate air quality control measures and the requirements as listed in the Air Pollution Control (Construction Dust) Regulation of APCO to control the air pollutant emissions, adverse air quality impact is not anticipated during construction.

Recommended Mitigation Measures

2.4.5. To ensure that dust and gaseous emissions are controlled during the construction phase of the Project, relevant air quality control requirements stipulated in Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Air Pollution Control (Fuel Restriction) Regulations should be implemented. The proposed control measures are listed below.

- The designated haul road should be hard paved to minimize fugitive dust emission;
- During the site formation works, the active works areas should be water sprayed with water browser or sprayed manually hourly during construction

period. The Contractor should ensure that the amount of water spraying is just enough to dampen the exposed surfaces without over-watering which could result in surface water runoff;

- Any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated as soon as possible;
- Dusty materials remaining after a stockpile is removed should be wetted with water;
- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore or similar;
- The Contractor(s) shall only transport adequate amount of fill materials to the Project Site to minimize stockpiling of fill materials on-site, thus reducing fugitive dust emission due to wind erosion;
- Should temporary stockpiling of dusty materials be required, it shall be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides; or sprayed with water so as to maintain the entire surface wet;
- All dusty materials shall be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet;
- Vehicle speed to be limited to 10 kph except on completed access roads;
- The portion of road leading only to a construction site that is within 30 m of a designated vehicle entrance or exit should be kept clear of dusty materials;
- Every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving the construction site;
- The load of dusty materials carried by vehicle leaving the construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle;
- The working area of excavation should be sprayed with water immediately before, during and immediately after (as necessary) the operations so as to maintain the entire surface wet;
- Restricting height from which materials are to be dropped as far as practicable to minimize the fugitive dust arising from loading/unloading activities;
- Every stock of more than 20 bags of cement or dry pulverized fuel ash shall be covered entirely by impervious sheeting or placed in an area sheltered on the

top and the 3 sides;

- Cement, pulverized fuel ash or any other dusty materials collected by fabric filters or other air pollution control system or equipment shall be disposed of in totally enclosed containers;
- Electric power supply shall be provided for on-site machinery as far as practicable;
- Regular maintenance of construction equipment deployed on-site should be conducted to minimize gaseous and prevent black smoke emission;
- Hoarding of not less than 2.4m high from ground level shall be provided along the site boundary except for a site entrance or exit to minimise dust nuisance to the nearby sensitive receivers. For locations with ASRs in immediate proximity to the Project Site, higher hoarding shall be erected; and
- Regular site audit shall be conducted to ensure all the mitigation measures are properly implemented.
- Electrified Non-road Mobile Machinery shall be provided as far as practicable.
- Non-road Mobile Machinery exempted from regulatory control shall be avoided as far as practicable.

2.4.6. With the implementation of above mitigation measures, no adverse construction phase air quality impact is anticipated.

2.5. OPERATION PHASE IMPACT REVIEW

Impact Identification and Evaluation

Vehicular Emission

2.5.1. Vehicular emission from existing open roads is the potential air pollution source to the Proposed Scheme during operation phase.

2.5.2. The Application Site is bounded by Kam Pok Road East and is subject to the air quality impact associated with the vehicular emission from existing open roads. In order to comply with the buffer distance requirements as stipulated in the HKPSG, the air-sensitive uses at the Proposed Development have been positioned away from Kam Pok Road East. The required buffer distances from the surrounding road were summarized in **Table 2.5** and illustrated in **Figure 2.2**. The TD's endorsement on the road type of Kam Pok Road East is provided in **Appendix 2.1**. No air sensitive uses, including openable windows, fresh air intake and recreational uses in the open space, would be located within the buffer zones.

Table 2.5 Relevant Buffer Distance Requirements

Road Name	Road Type	Recommended Buffer Distance in HKPSG	Buffer Distance allowed for the Proposed Scheme
Kam Pok Road East	Rural Road	-	>5m

Note:

As advised by the Project's Traffic Consultant and clarified by the Transport Department (TD), Kam Pok Road East (from Castle Peak Road - Tam Mi to Kam Pok Road) is classified as a rural road. There is no buffer distance requirement for rural road specified in HKPSG, a 5m buffer distance is still allowed to minimize air quality impact on the Proposed Development.

2.5.3. As the required buffer distances between ASRs and the surrounding roads could be achieved, no adverse air quality impact associated with vehicular emission on the Proposed Scheme is anticipated.

Emission from carpark within the Proposed Development

2.5.4. The car parks within the Proposed Development will be designed and operated in accordance with ProPECC PN 2/96 Control of Air Pollution in Car Parks. The car parks are mainly used for private car parking and the starting emissions generated by the vehicles are expected to be limited. Nonetheless, the idling period of vehicles will be governed by Cap. 611 Motor Vehicle Idling (Fixed Penalty) Ordinance which excessive emissions from idling vehicles within the Application Site is not expected. Given the above, no adverse air quality impact from car park operations is anticipated.

Industrial Emission from nearby chimney

2.5.5. A review of chimney locations based on EPD's register and license for specified processes (SP) available on Hong Kong Environmental Database (HKED) was carried out. No chimneys were identified within the 200m assessment area. Additional chimney surveys were also conducted in July 2025 to verify the findings. As no chimneys were identified within the assessment area and no active and heavy industrial operation in the vicinity is observed, no adverse air quality impact on the proposed development related to chimney emissions is anticipated.

Odour Emission

2.5.6. Based on the desktop review and site surveys conducted in July 2025, no particular air and odour emission sources were identified within 200m radius from the proposed development. During the site visit, no particular odour source was detected, and no odour source from the nearby nullahs, including Ngau Tam Mei Drainage Channel and its subsidiary nullahs, and nearby ponds was identified.

Recommended Mitigation Measures

2.5.7. The setback distance between the building façades and the fresh air intakes/opened windows is recommended to be at least 5m away from Kam Pok Road East to satisfy the recommended buffer distance from the carriageway as per Chapter 9 of HKPSG

2.6. CONCLUSION

2.6.1. Fugitive dust and gaseous emission is the major source of air pollution during the construction phase of the Project. Through proper implementation of air quality control measures as required under the Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Air Pollution Control (Fuel Restriction) Regulations, construction dust and gaseous emissions can be controlled. Therefore, adverse air quality impact during construction phase is not anticipated.

2.6.2. The potential operation phase air quality impact due to vehicular emission from the surrounding roads, industrial emission and odour emission have been evaluated. No industrial and odour sources is identified during site survey and the HKPSG buffer distance requirements could be complied, therefore, no adverse operation phase air quality impact on the Proposed Scheme is expected.

3. NOISE IMPACT

3.1. INTRODUCTION

3.1.1. The Project will have potential noise impacts during the construction and operation phases. During the construction phase, potential construction airborne noise impact may be generated due to the use of powered mechanical equipment (PME) for various construction works including site formation, foundation and superstructure. During the operation phase of the Project, noise due to building equipment will also have potential noise impacts to the NSRs nearby.

3.2. RELEVANT LEGISLATION, STANDARDS AND GUIDELINES

3.2.1. The relevant legislation, standards and guidelines applicable to the present noise impact assessment include:

- Noise Control Ordinance (NCO) (Cap. 400);
- Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites (IND-TM);
- Technical Memorandum on Noise from Construction Work Other Than Percussive Piling (GW-TM);
- Technical Memorandum on Noise from Construction Work in Designated Areas (DA-TM);
- Technical Memorandum on Noise from Percussive Piling (PP-TM);
- Hong Kong Planning Standards and Guidelines (HKPSG);
- Professional Persons Environmental Consultative Committee (ProPECC) Practice Note PN 1/24 "Minimizing Noise from Construction Activities"; and
- Good Practices on the Control of Noise from Electrical & Mechanical Systems

3.3. CONSTRUCTION PHASE IMPACT REVIEW

Noise Standards for Construction Works during Non-restricted Hours

3.3.1. ProPECC PN1/24 offers guidance on the existing control on noise from construction activities under the Noise Control Ordinance (NCO) and Environmental Impact Assessment Ordinance (EIAO). It also outlines the requirements and recommendations on the practices for minimizing construction noise. The noise generated by construction activities for the project during non-restricted hours (7 a.m. to 7 p.m. on any day that is not a Sunday or general holiday) should be minimized to the greatest extent practicable. Additionally, the construction noise at the facade of the respective noise-sensitive receivers should not exceed the following noise levels, as summarized in **Table 3.1** below.

Table 3.1 Noise Standards for Construction Works during Non-restricted Hours

Uses	$L_{eq\ (30\ mins)}$, dB(A)
All domestic premises Temporary housing accommodation Hostels Convalescences homes Homes for the aged	75
Places of public worship Courts of law Hospitals and medical clinics	70
Educational institutions (including kindergartens and nurseries)	70 (65 during examination)
Note: The above standards apply to uses which rely on opened windows for ventilation and are assessed at 1m from the external façade.	

Noise Standards for Construction Works during Restricted Hours

3.3.2. Noise impacts arising from construction activities (excluding percussive piling) conducted during the restricted hours (1900 to 0700 hours on any day and anytime on Sunday and general holiday) are governed by the NCO.

3.3.3. All the proposed construction works are expected to be carried out during non-restricted hours. In case of any construction activities during restricted hours, it is the Contractor's responsibility to ensure compliance with the NCO and the relevant technical memoranda. The Contractor will be required to submit a construction noise permit (CNP) application to the Noise Control Authority and abide by any conditions stated in the CNP, should one be issued. It should be noted that description made in this report does not guarantee that a CNP will be granted for the project construction.

The Noise Control Authority would take into account the contemporary condition of adjoining land uses and other considerations when processing the CNP application based on the NCO and relevant technical memoranda issued under the NCO. The findings in this report shall not bind the Noise Control Authority in making the decision.

Noise Standards for Percussive Piling

3.3.4. Noise impact arising from percussive piling at any time is also governed by the NCO. The noise criteria and the assessment procedures for issuing a CNP for percussive piling are specified in the PP-TM. Separate application to EPD for a CNP is required.

3.3.5. Should percussive piling be required, the requirements in the PP-TM shall be followed.

Impact Identification and Evaluation

3.3.6. The potential source of noise impact during the construction phase would be the use of PME for various construction activities. The key construction works would include:

- Site clearance, including demolition of existing structures and tree removal;
- Site formation;
- Foundation; and
- Construction of superstructure.

3.3.7. No construction works will be carried out during restricted hours. Should restricted hours works or percussive piling work be required, the Contractor shall apply for a CNP and ensure full compliance with the NCO.

Recommended Mitigation Measures

3.3.8. Standard construction noise control measures such as adoption of quieter construction method, use of quality PME (QPME) with lower sound power level (SWL), use of movable noise barriers and noise enclosures to screen noise from PME, and implementation of good site practices to limit noise emissions at source are recommended.

3.3.9. Good site practices and noise management can further minimize the potential construction noise impact. The following good site practices are recommended for implementation during construction phase:

- Contractor shall devise and execute working methods that will minimize the noise impact on the surrounding environment; and shall provide experienced personnel with suitable training to ensure these methods are properly implemented;
- Noisy activities should be scheduled to minimize exposure of nearby NSRs to high levels of construction noise. For example, noisy activities can be scheduled for midday or at times coinciding with periods of high background

noise (such as during peak traffic hours);

- The Contractor should arrange construction activities with care so that concurrent construction activities are avoided as much as possible;
- Only well-maintained plant should be operated on-site and plant will be serviced regularly during the construction phase;
- Machines and plant that may be in intermittent use should be shut down between work periods or throttled down to a minimum;
- Silencers or mufflers on construction equipment should be utilized and properly maintained during the construction phase;
- Noisy equipment such as emergency generators shall always be sited as far away as possible from NSRs;
- Mobile plants should be sited as far away from NSRs as possible;
- Plant known to emit noise strongly in one direction should be orientated so that the noise is directed away from the nearby NSRs; and
- Material stockpiles and other structures should be effectively utilized in screening noise from on-site construction activities.

3.4. OPERATION PHASE

Noise Standards for Fixed Noise Impact Assessment

3.4.1. IND-TM stipulates the appropriate Acceptable Noise Level (ANL) for fixed noise sources. The ANL is dependent on the area sensitivity rating of a noise sensitive receivers (NSR), as defined in Table 1 of the IND-TM (reproduced in **Table 3.2**). The area sensitivity rating of a NSR is determined by the type of area where the NSR is located and the presence of any influencing factors (IFs) such as major roads and industrial areas.

Table 3.2 Area Sensitivity Ratings

Type of Area Containing NSR	Degree to which NSR is affected by IF		
	Not Affected	Indirectly Affected	Directly Affected
Rural area, including country parks or village type developments	A	B	B
Low density residential area consisting of low-rise or isolated high-rise developments	A	B	C
Urban area	B	C	C
Area other than those above	B	B	C

3.4.2. The HKPSG also states that in order to plan for a better environment, all planned fixed noise sources should be located and designed that when assessed in accordance with the IND-TM, the level of the intruding noise at the façade of the nearest existing sensitive use should be at least 5 dB(A) below the appropriate ANL shown in Table 2 of IND-TM or, in the case of the background being 5 dB(A) lower than the ANL, should not be higher than the background. The ANLs stipulated in the IND-TM are provided in **Table 3.3.**

Table 3.3 Acceptable Noise Levels

Time Period	Area Sensitivity Rating		
	A	B	C
Day (0700 to 1900 hours)	60	65	70
Evening (1900 to 2300 hours)			
Night (2300 to 0700 hours)	50	55	60

3.4.3. The Project Site is located in an area contains mainly residential and village type developments, with some open storage uses in the vicinity. In view of this, the type of area is classified as “village type developments”. According to the Annual Traffic Census 2023 published by the Transport Department, San Tin Highway is classified as Primary Distributors with an annual average daily traffic (AADT) of 88,760 in excess of 30,000. Hence, San Tin Highway is considered as major roads under the IND-TM and thereby an influencing factor. As the planned NSRs within the Proposed Development will be located from approximately 170m from San Tin Highway with vegetation and plants in between blocking direct line of sight, they will not be directly affected by major roads. As such, Area Sensitivity Rating of “B” has been assigned for the NSR.

3.4.4. In any event, the ASR assumed in this report is for indicative assessment only. It should be noted that the noise emanating from any place other than domestic premises, a public place or a construction site is controlled under Section 13 of the Noise Control

Ordinance. At the time of investigation, the Noise Control Authority shall determine the noise impact from concerned sources on the basis of prevailing legislation and practices being in force and taking account of contemporary conditions/situations of adjoining land uses. Nothing in this report shall bind the Noise Control Authority in the context of law enforcement against all the sources being assessed.

Noise Standards for Road Traffic Noise Impact Assessment

3.4.5. Table 4.1 of Chapter 9 of the HKPSG provides the assessment criteria for road traffic noise impact at noise sensitive uses which rely on opened windows for ventilation. **Table 3.4** summarizes the adopted road traffic noise criteria for noise sensitive uses with openable windows at the Proposed Scheme.

Table 3.4 Road Traffic Noise Criteria for Noise Sensitive Uses

Location	Use	$L_{10\ (1\ hour)}$, dB(A)
G/F – 2/F	RCHE Dormitory	70
G/F – 1/F	Multi-Purpose Area [2]	70
G/F	Rehab Zone	70
1/F	Dining Area	70
1/F	End-of-Life Area [3]	70
1/F	Isolation Room [3]	70
1/F	Sick Bay [3]	70

Notes:

[1] The above standards apply to noise sensitive uses which rely on opened windows for ventilation and should be viewed as the maximum permissible noise levels assessed at 1m from the external façade.

[2] The multi-purpose area is mainly dedicated for providing space for daily exercise and holding events during different festival and functions for the occupants. No diagnostic, public worship and educational activities is anticipated in the area.

[3] As advised by the Project Team, the Sick Bay, Isolation Room and End-of-Life rooms are designated as an isolation room for infection control purposes. No medical operation and/or diagnostic activities will be carried out in the concerned room. Therefore, the noise planning standard of 70 dB(A) for domestic uses as stipulated in Table 4.1 of Chapter 9 of the HKPSG is adopted.

Noise sensitive receivers

3.4.6. Existing NSRs and planned/committed noise sensitive uses identified on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land use plans, including plans and drawings published by the Lands Department and any land use and development applications approved by the Town Planning Board have been identified. The first layer of representative NSRs within the 300m assessment area are listed in **Table 3.5** below

and their locations are illustrated in **Figure 3.1**.

Table 3.5 Representative Noise Sensitive Receivers

NSR ID	Description	Nature of Use	Existing/ Planned	Approximate Shortest Distance from Project Site, m
N01	Merry Garden	Residential	Existing	90
N02	Meister House	Residential	Existing	256
N03	Man Yuen Chun	Residential	Existing	265
N04	Planned Residential Development	Residential	Planned	27
N05	Prospera Villa	Residential	Existing	45

Road Traffic Noise Impact on the Proposed Scheme

Impact Identification

3.4.7. The Project Site is bounded by Kam Pok Road East to the south, Castle Peak Road – Tam Mi and San Tin Highway to the east. In order to construct new access road including Emergency Vehicular Access (EVA) to the Proposed Site, there are parts of the existing noise barriers at the south boundary of the site adjoining Kam Pok Road East are proposed to be demolished, details of modification plan is provided in **Appendix 3.5**. The key noise impact during operation phase would be road traffic noise from the abovementioned roads and other local roads.

Noise Sensitive Uses

3.4.8. Noise assessment points have been provided for all noise sensitive uses with openable windows at the Proposed Development. The respective criteria for all types of noise sensitive uses with openable windows have been listed in **Table 3.4**. The locations of all NSRs for road traffic noise impact assessment are shown in **Figures 3.2a** to **3.2c**.

Assessment Methodology

3.4.9. The road traffic noise impact from the existing and planned road network has been assessed within 300m assessment area on the future NSRs within the Proposed Development. The road traffic noise model adopts the methodology outlined in the Calculation of Road Traffic Noise (CRTN) developed by the UK Department of Transport. The road traffic noise would be presented in terms of noise levels exceeded for 10% of the one-hour period for the hour having the peak traffic flow $L_{10(1hour)}$ under various traffic forecast scenarios. Representative NAPs, key building structures with noise screening effects, topographical contours and road segments with traffic flow

data have been inputted into the model in predicting the potential traffic noise impacts.

3.4.10. Traffic flow of the existing and planned roads within 300m assessment area have been forecasted by the traffic consultant of the Project. As stated in CRTN, the traffic flow used for assessment shall be the maximum traffic projection within 15 years upon occupancy of the development. The assessment has been undertaken based on the projected AM peak hourly traffic flows in Year 2045, which corresponds to the maximum projected traffic conditions within 15 years upon occupancy of the Proposed Development, i.e. Year 2030. The traffic forecast data is enclosed in **Appendix 3.1**. The traffic forecasting methodology for producing the adopted traffic data has been submitted to the Transport Department (TD) for endorsement.

Predicted Road Traffic Noise Impact on the Proposed Development under Base Case Scenario

3.4.11. Predicted peak hourly road traffic noise levels at all NSRs within the Proposed Development are summarized in **Table 3.6** below. Detailed breakdown of the road traffic noise impact assessment results under base case scenario are presented in **Appendix 3.2**.

Table 3.6 Summary of Predicted Road Traffic Noise Levels (Base Case Scenario)

Floor	Facility / Room	Noise Criteria, dB(A)	Predicted Maximum $L_{10\ (1\ hour)}$, dB(A)
G/F	RCHE Dormitory	70	66
G/F	Multi-Purpose Area	70	66
G/F	Rehab Zone	70	68
1/F	RCHE Dormitory	70	67
1/F	Multi-Purpose Area	70	73
1/F	End-of-Life Area, Isolation Room, Sick Bay	70	75
1/F	Dining Area	70	75
2/F	RCHE Dormitory	70	77

3.4.12. In view of the predicted traffic noise level exceeded noise standard, mitigation measures are required to ensure the noise level would be comply with relevant noise standard.

3.4.13. With reference to "Practice Note on Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact", the design of AW(BT) and corresponding noise reduction is shown in **Appendix 3.3**. The locations of the proposed acoustic window (baffle type) are shown in **Figure 3.3**.

3.4.14. The proposed reference cases can provide noise reduction from 6dB(A) to 7dB(A) based on their corresponding room size. It is understood that the room size would also affect the sound attenuation performance. A conservative approach is adopted by adjusting the sound attenuation based on the relative room size of the project case and reference case. The sound attenuation is adjusted (downward only) based on the ratio of the room size of the project case and the reference case in order to reflect the difference in the base case (using conventional window). On the other hand, in case the room size of the project case is larger than the reference case or opening size of the conventional window in the project case is smaller than the reference case, no adjustment is made as a conservative approach. the room size of dormitory is typically 40 to 50 m^2, which is larger than 18 m^2 of the reference case, therefore, no room size correction is included for conservative approach.

3.4.15. The assessment results revealed that all NSRs within the Proposed Development could comply with the respective noise criteria under the mitigated scenario. Hence, no adverse road traffic noise impact on the Proposed Development is anticipated and no road traffic noise mitigation measure is required.

Planned Fixed Noise Impact from the Proposed Scheme

Prevailing Background noise Levels

3.4.16. Prevailing background noise measurement was conducted on 23 July 2025 for both daytime time and night-time periods. The measurement location is shown in **Figure 3.4**. The weather was fine during measurement. Measurements shall be accepted as valid only if the calibration levels from before and after the acoustic measurement agree to within 1.0dB(A). Noise measurement will not be made in the presence of fog, rain and wind with a steady speed exceeding 5ms-1 or wind with gusts exceeding 10ms-1. The background noise monitoring results is summarized in **Table 3.7**.

Table 3.7 Background Noise Monitoring Results

Measurement Location	Period	Noise Level, dB(A)
BGN1[1]	Day/Evening time	62.8
	Night time	51.6
Notes: [1] +3 façade correction is included for free-field measurement. [2] The noise measurement descriptor is A-weighted equivalent continuous sound pressure level (Leq) measured using Type 1 sound level meter (SVAN 979 Sound Level Meter).		

Impact Identification and Evaluation

3.4.17. According to the latest development scheme, potential fixed noise sources within the Proposed Scheme include the transformer room and E&M rooms. During the operation

phase, potential fixed noise sources will be fully enclosed and located inside the building structure. Noise impact arising from fixed plants is expected to be minimal.

3.4.18. To ensure the fixed plant noise generated by the Proposed Scheme would not cause excessive impact to neighbouring noise sensitive uses, potential fixed noise sources within the Proposed Scheme shall be properly designed to meet the relevant noise criteria as stipulated in Chapter 9 of the HKPSG.

3.4.19. Provisions shall be made to control the fixed noise sources by suitable at source noise control measures such as silencers and acoustic linings when necessary. As such, it is anticipated that the fixed plant noise impact on the surrounding NSRs due to the operation of the Proposed Scheme will not exceed the relevant noise criteria under the HKPSG and NCO.

Recommended Mitigation Measures

3.4.20. The following noise mitigation measures are recommended to control noise emissions from planned fixed plant noise sources within the Proposed Scheme:

- All the noisy plants should be installed within plant room or with acoustic enclosure;
- Proper selection of quiet plant aiming to reduce the tonality at NSRs;
- Installation of silencer / acoustic enclosure / acoustic louvre for the exhaust of ventilation system;
- Openings of ventilation systems should be located away from NSRs as far as practicable and oriented away from the NSRs;
- Installation of absorptive noise barrier (with density of absorption material of 48kg/m^3) for the aerator which would duly shield the engine and other noisy parts of the aerator as far as practicable, and;
- Provide suitable at source noise control measures with reference to EPD's "Good Practices on Ventilation System Noise Control" and "Good Practices on Pumping System Noise Control" such as silencers and acoustic linings when necessary.

Fixed Noise Impact on the Proposed Development

Identification of Fixed Noise Sources

3.4.21. A number of existing fixed noise sources have been identified within 300m assessment area through desktop study and site visit conducted on 12 May 2025 and 23 July 2025. **Figure 3.4** indicates the locations of existing major fixed noise sources with details summarized in **Table 3.8**.

Table 3.8 Information of the Identified Fixed Noise Sources

Location	Source ID	Equipment	Approximate Shortest Horizontal Distance to the Project Site
祥發五金貿易有限公司	S01	Lorry Crane	172m
Hung Kee Metal Recycling Int'l Ltd.	S02	Lorry Crane	200m
Dorfield Ltd.	S03	Fork Lift	234m

3.4.22. An approved Section 16 application (Application No. A/YL-NSW/318) for the development of a public vehicle parking area excluding Container Vehicle with EV charging facilities near the project site is identified as potential noise source to the Proposed Development. During site survey, car park is currently in operation, however, no noticeable noise is recorded. Given the development only allowed for 5 years operation, no adverse fixed noise impact is anticipated.

3.4.23. Detailed calculations of fixed noise assessment at NSRs are shown in **Appendix 3.4**, fixed noise assessment point with shortest distance to the noise sources is selected to demonstrate worst case scenario, all results complied with relevant noise standard, therefore, no adverse fixed noise impact to the Proposed Development is expected.

3.5. CONCLUSION

3.5.1. Evaluation on construction noise impact associated with different construction activities has been conducted. With the implementation of practical mitigation measures including good site management practices, use of quieter construction methods and equipment, and use of movable noise barriers and noise enclosures, the construction noise impact on the nearby NSRs would be minimized.

3.5.2. Traffic noise impact has been identified and assessed based on the maximum traffic flow within 15 years upon commencement of operation of the Proposed Development. With the implementation of noise mitigation measures (i.e., Acoustic Windows (Baffle Type)), no adverse traffic noise impact is anticipated.

3.5.3. To ensure the fixed plant noise generated by the Proposed Scheme would not cause excessive impact to neighbouring noise sensitive uses, potential fixed noise sources within the Proposed Scheme shall be properly designed to meet the relevant noise criteria as stipulated in Chapter 9 of the HKPSG. Provisions shall be made to control the fixed noise sources by suitable at source noise control measures such as silencers and acoustic linings when necessary. As such, no adverse fixed plant noise impact on the surrounding NSRs due to the operation of the Proposed Scheme is expected

3.5.4. It is noted that there are parts of the existing noise barriers at the south boundary of the site adjoining Kam Pok Road East are proposed to be modified for construction of access roads to the Proposed Site. Any modification to the noise barrier is subject to the approval of relevant government department, i.e., the Highways Department. Also, the road traffic noise impact on the proposed development and nearby noise sensitive receivers (NSRs) due to the modification of the noise barrier should be addressed. As such, an updated NIA will be submitted under approval condition if the planning application is approved to address the above-mentioned issues.

3.5.5. In the updated NIA, schedule of implementation, for example, to remove the noise barrier only after the Proposed RCHE is in place, or to provide interim measures (if required) to mitigate road traffic noise impact to nearby NSRs should be provided. In addition, TD's endorsement on the traffic data adopted in the updated NIA should also be provided and the separated cells of the dormitory should not be divided by full-height partitions.

4. WATER QUALITY IMPACT

4.1. INTRODUCTION

4.1.1. This section identifies the potential water quality impact that could arise from the Project during its construction and operation phases. It also recommends the corresponding measures to pre-empt and mitigate potential impacts as necessary.

4.2. RELEVANT LEGISLATION, STANDARDS AND GUIDELINES

4.2.1. The relevant legislation, standards and guidelines applicable to the present environmental review of water quality impacts include:

- Water Pollution Control Ordinance (WPCO) (Cap. 358);
- Water Pollution Control (General) Regulations (Cap. 358D);
- Water Pollution Control (Sewerage) Regulation (Cap. 358AL);
- Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS);
- Hong Kong Planning Standards and Guidelines (HKPSG);
- Professional Persons Environmental Consultative Committee (ProPECC) Practice Note PN 1/23 “Drainage Plans subject to Comment by the Environmental Protection Department – Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations”; and
- Professional Persons Environmental Consultative Committee (ProPECC) Practice Note PN 2/24 “Construction Site Drainage”.

4.2.2. Under the WPCO, Hong Kong waters are divided into ten Water Control Zones (WCZs) and four supplementary water control zones. Corresponding statements of Water Quality Objectives (WQOs) are stipulated for different water regimes (marine waters, inland waters, bathing beaches subzones, secondary contact recreation subzones and fish culture subzones) in each of the WCZ based on their beneficial uses. The Project Site falls within the Deep Bay WCZ and the respective WQOs shall be followed.

4.3. WATER SENSITIVE RECEIVERS

4.3.1. The assessment area for water quality is defined by a distance of 500m from the Project Site boundary. Water sensitive receiver (WSR) located within 500m assessment area is listed in **Table 4.1** and its location is shown in **Figure 4.1**.

Table 4.1 Water Sensitive Receiver

WSR ID	Description	Approximate Distance from Site Boundary
W01	Ngau Tam Mei Channel	380m
W02	River Channel	30.5m
W03	Ponds	38m
W04	Ponds	25m

4.4. CONSTRUCTION PHASE IMPACT REVIEW

Impact Identification and Evaluation

4.4.1. The major water quality concerns during the construction phase shall be the on-site runoff from dust suppression activities and rainfall, sewage effluent from construction workforce, and chemical spillage. The key pollutants would be suspended solids from surface runoff and other pollutants would include fuel and lubricant oil from the construction vehicles and powered mechanical equipment (PME) on-site.

4.4.2. The Contractor is required to apply discharge license for the discharge of effluent from the construction site under the WPCO and all discharges during the construction should comply with the TM-DSS issued under the WPCO.

4.4.3. During the construction of the Project, the workforce on-site will generate sewage effluents, which are characterized by high levels of Biochemical Oxygen Demand (BOD), ammonia and *E. coli* counts. Potential water quality impacts upon the local drainage and freshwater system may arise from these sewage effluents, if uncontrolled. The construction sewage should be handled by interim sewage treatment facilities, such as portable chemical toilets. Appropriate number of portable toilets should be provided by a licensed contractor to serve the large number of construction workers over the construction site. Provided that sewage is not discharged directly into the storm drains or watercourses adjacent to the construction site, and temporary sanitary facilities are used and properly maintained, it is unlikely that sewage generated from the Project Site would have a significant water quality impact.

4.4.4. A large variety of chemicals may be used during construction activities. These may include petroleum products, surplus adhesives, spent lubrication oil, grease and mineral oil, spent acid and alkaline solutions/solvent and other chemicals. The use of these chemicals and their storage as waste materials has the potential to create impacts on the water quality of adjacent watercourses or storm drains if spillage occurs. Waste oil may infiltrate into the surface soil layer, or runoff into local watercourses, increasing hydrocarbon levels. The potential impact could however be mitigated by practical mitigation measures and good site practices as given in the Waste Disposal

Ordinance (Cap. 354), its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) and the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.

Recommended Mitigation Measures

4.4.5. To mitigate the water quality impact during construction phase, construction practices outlined in the ProPECC PN 2/24, where applicable, shall be implemented. Typical relevant wastewater control measures include:

- Surface runoff from construction sites should be discharged into storm water drains via adequately designed sand/silt removal facilities such as sand traps, silt traps, sedimentation tanks and sediment basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct surface runoff to such silt removal facilities. Perimeter channels at site boundaries should be provided where necessary to intercept surface run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks;
- Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times;
- Construction works should be programmed to minimize soil excavation works in rainy seasons (generally from April to September). If soil excavation works could not be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporarily exposed slope surfaces should be covered (e.g. by tarpaulin), and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest/edge of excavation) to prevent surface runoff from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm;
- Earthworks final surfaces should be well compacted and the subsequent permanent works or surface protection works should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary;
- Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar impermeable fabric during rainstorms. Measures should be taken to prevent washing away

construction materials, soil, silt or debris into any drainage system;

- Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent surface runoff from getting into foul sewers. Discharge of surface runoff into foul sewers must always be prevented in order not to unduly overload the foul sewerage system;
- Wastewater generated from the washing down of mixer trucks and drum mixers and similar equipment should wherever practicable be recycled. The discharge of wastewater should be kept to a minimum;
- All vehicles and plants should be cleaned before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm water drains. The section of construction road between the wheel washing bay and the public road should be paved to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains;
- Before commencing any demolition works, all sewer and drainage connections should be sealed to prevent building debris, soil, sand, etc. from entering public sewers/drains;
- Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the storm water drainage system;
- Sewage from toilets, kitchens and similar facilities should be discharged into a foul sewer. If there is no foul sewer in the vicinity, chemical toilets, a septic tank and soakaway system will have to be provided as appropriate;
- Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should as far as possible be located within roofed areas. The drainage in these covered areas should be connected to the foul sewer via petrol interceptor(s). Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance (Cap. 354);
- Sufficient number of chemical toilets shall be provided by a licensed contractor and properly maintained; and
- The construction solid waste, debris and rubbish on-site should be collected, handled and disposed of properly to avoid causing any water quality impacts.

4.4.6. By adopting the above mitigation measures with best management practices, the

impacts arisen during the construction phase would be reduced to an acceptable level and adverse water quality impacts would not be anticipated.

4.5. OPERATION PHASE IMPACT REVIEW

Impact Identification and Evaluation

4.5.1. During operation phase, stormwater runoff from paved surfaces within the Project Site would be directed to a managed stormwater drainage system following the requirements in the ProPECC PN 1/23. Runoff from the roofs of buildings and road surfaces within the Project Site may carry suspended solids and other pollutants such as fuel, oils and heavy metals that could enter nearby surface water bodies or storm drains if uncontrolled. With implementation of stormwater best management practices including provision of trapped gullies and catchpits, adverse impact to the water quality is not anticipated.

4.5.2. Effluent discharge from the kitchen within the Proposed Development during operation phase is also governed by the WPCO. All restaurants and food processing factories are required to install grease traps so that greasy materials will be separated from wastewater before passing to communal sewers. The operator shall ensure that the grease traps are properly designed, constructed and maintained so as to effectively remove greasy materials from wastewater before discharge to the sewerage system. Materials removed from a grease trap shall be handled and disposed of properly in order to maintain kitchen hygiene and protect Hong Kong's environment. “Grease Traps for Restaurants and Food Processors” published by the EPD detailed the requirements of such discharge.

4.5.3. Sewage discharge would be the major water pollution source throughout the operation phase of the Proposed Development. Sewage generated from the Proposed Development would be collected and conveyed to the nearest public sewerage system, which is the Nam Sang Wai Sewage Pumping Station and Yuen Long Sewage Treatment Works, via proper connections. No sewage will be released to the environment without treatment.

Recommended Mitigation Measures

4.5.4. The following mitigation measures are recommended to avoid causing any water quality impacts during the operation phase:

- Grease traps should be properly designed and constructed so as to effectively remove greasy materials from the kitchen wastewater before discharge to the sewerage system;
- Grease traps should be properly maintained so that it can continue to function

as an effective grease removal device; and

- Materials removed from a grease trap should be handled and disposed of properly.

5. WASTE MANAGEMENT

5.1. INTRODUCTION

5.1.1. This section aims to assess the potential environmental impacts that may be resulted from the waste generation during the construction and operation of the Proposed Development. Options of reuse, minimization, recycling, treatment, storage, collection, transport and disposal of such wastes were examined. Where appropriate, procedures for waste reduction and management were considered, with environmental control measures to avoid or to minimize the impacts.

5.2. RELEVANT LEGISLATION, STANDARDS AND GUIDELINES

5.2.1. The Waste Disposal Ordinance (WDO) (Cap. 354) prohibits unauthorized disposal of wastes, with waste defined as any substance that is abandoned. All wastes should be properly stored and disposed in accordance with relevant waste management regulations and guidelines listed below:

- Waste Disposal Ordinance (Cap. 354);
- Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C);
- Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N);
- Waste Disposal (Clinical Waste) (General) Regulation (Cap. 354O);
- Land (Miscellaneous Provisions) Ordinance (Cap. 28);
- Public Health and Municipal Services Ordinance (Cap. 132);
- Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK);
- Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes; and
- Code of Practice for the Management of Clinical Waste – Small Clinical Waste Producers.

5.3. CONSTRUCTION PHASE IMPACT REVIEW

5.3.1. The construction activities to be carried out for the Proposed Development would result in the generation of a variety of wastes (i.e. construction and demolition (C&D) materials, chemical waste and general refuse). These C&D materials and wastes if not properly stored, handled and disposed of would give rise to environmental impacts, such as dust, odour, water quality and visual impacts.

5.3.2. Waste disposal during the construction phase would follow the trip ticket system and

comply with legislation requirements including:

- Application for a billing account in accordance with the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N); and
- Registration as a Chemical Waste Producer and storage/disposal of chemical wastes in accordance with the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C).

Construction and Demolition Materials

5.3.3. C&D materials would be generated from the demolition and construction activities. All C&D materials generated shall be sorted into inert (i.e. excavated soil, rock, broken concrete) and non-inert C&D materials (i.e. vegetation, wood, plastics, packaging materials, etc). Inert C&D material reused on-site shall be encouraged to minimize material volumes requiring off-site transport. On-site reuse opportunities for inert materials will be identified prior to delivery to public fill reception facilities. Non-inert C&D materials should be reused or recycled, and landfill disposal should be considered as the last resort for waste handling. A summary of the estimated generation of the C&D materials is provided in **Table 5.1**.

Table 5.1 Government Waste Facilities for Construction Waste

Type of C&D Materials		**Volume (m^3)**
Inert C&D materials	Total generation	1,169
	On-site reuse (i.e., backfilling)	117
	Transferred to surplus at public fill reception facilities (i.e., Tuen Mun 38 Fill Bank)	1052
Non-inert C&D materials to dispose of landfill (i.e., WENT landfill)		86.5
	Total	1,255.5

Chemical Waste

5.3.4. The maintenance and servicing of the construction plants and vehicles may generate a small amount of chemical waste, such as cleaning fluids, solvents, lubrication oil and fuels.

5.3.5. Chemical waste arising during the construction phase may pose environmental, health and safety hazards if not stored and disposed of appropriately as outlined in the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) and the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. The potential

hazards include:

- Toxic effects on the construction workforce;
- Adverse impact on air quality and water quality due to spills; and
- Fire hazards.

5.3.6. Chemical waste may be generated any time throughout the construction phase of the Project. The amount of chemical waste that will arise from the construction activities will be highly dependent on the Contractor's on-site maintenance activities and the quantity of plant and equipment utilised. With respect to the scale of the construction activities, it is anticipated that the quantity of chemical waste to be generated will be small (i.e., a few litres per month). The chemical waste will be properly stored on site and will be collected by licensed chemical waste collectors regularly for disposal at the licensed chemical waste treatment facilities (i.e. Chemical Waste Treatment Centre (CWTC) in Tsing Yi). Reuse and recycle shall be prioritized, where disposal shall be the last resort for waste handling.

5.3.7. Storage, handling, transport and disposal of chemical waste should be arranged in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste published by the EPD. A trip-ticket system should be operated in accordance with the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) to monitor all movements of chemical wastes which would be collected by licensed chemical waste collectors to a licensed facility for final treatment and disposal.

5.3.8. Provided that the chemical waste is properly stored, handled, transported and disposed of, no adverse environmental impact would result from a minimal quantity of chemical waste arising from the Project.

General Refuse

5.3.9. The construction workforce would generate refuse comprising food scraps, paper waste, empty containers, etc. It is estimated that a maximum of about 15 construction workers will be working on site at any one time during the construction phase of the Project. With a general refuse generation rate of 0.65 kg per worker per day, the maximum amount of general refuse to be generated will be about 9.75 kg per day. The amount of general refuse which is likely to produce cannot be quantified at this time as it will be largely dependent on the size of the workforce employed by the contractor. General refuse will be produced any time throughout the construction phase of the Project. Such refuse will be properly stored in a designated area prior to collection and disposal. Disposal of refuse at site other than approved waste transfer or disposal facilities is prohibited. Effective collection of the on-site waste will prevent waste materials being blown around by wind, or creating an odour nuisance or pest and vermin problems. Waste storage areas will be well maintained and cleaned

regularly.

5.3.10. The daily generation of general refuse during the construction phase would be minimal and those waste generated could be effectively controlled by normal measures. With the implementation of good waste management practices on-site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of general refuse.

5.4. OPERATION PHASE IMPACT REVIEW

General Refuse

5.4.1. General refuse is anticipated during the operation of the Proposed Development. It would be generated from the daily activities of elders, staff and visitors. General refuse would include food waste, paper waste and domestic waste. It is estimated that a maximum of 208 residents, 90 workers and visitors will be occupied in the development. With a general refuse generation rate of 1.44kg per person per day and recovery rate of 33% as per the Monitoring of Solid Waste in Hong Kong 2023, the maximum amount of general refuse to be generated will be about 640.5 kg per day during the operation phase. The storage of general refuse has potential to give rise to adverse environmental impacts. These include odour if waste is not collected frequently, windblown litter and visual impact. The Proposed Development may also attract pests and vermin if the waste storage area is not well maintained and cleaned regularly.

5.4.2. General refuse generated during the operation phase will be collected at the refuse collection point provided within the Proposed Development for further collection. The waste management practice will comply with the statutory requirements.

5.4.3. With the implementation of good waste management practices on-site, the environmental impacts caused by storage, handling, transportation and disposal of general refuse are expected to be minimal.

Other Waste

5.4.4. Small amount of chemical waste (e.g. lubricant generated from maintenance of equipment) and clinical waste (e.g. cartridges, ampoules, surgical dressings, swabs) may be generated during operation when the need arises. With a chemical waste generation rate of 0.003kg/day and a clinic waste generation rate of 0.001kg/day and the total occupancy of 298 person, it is anticipated that the maximum amount of other waste to be generated will be about 1.19kg per day during the operation phase. The handling, storage, transportation and disposal of chemical and clinical waste shall

comply with the requirements stipulated in the following legislation and code of practice:

- Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C);
- Waste Disposal (Clinical Waste) (General) Regulation (Cap. 354O);
- Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes; and
- Code of Practice for the Management of Clinical Waste – Small Clinical Waste Producers.

5.4.5. Provided that relevant legislation and code of practice are strictly followed during the handling, storage, transportation and disposal of chemical waste and clinical waste, no adverse environmental impact is anticipated.

5.5. WASTE MANAGEMENT STRATEGIES

5.5.1. In line with Government's position on waste minimization, the practice of avoiding and minimizing waste generation and waste recycling should be adopted. It is recommended that waste reduction and management would be implemented, including the provision of recycling bins and adequate space to facilitate separation, collection and storage of recyclable materials for recycling in the refuse storage and material recovery chamber.

Waste Management Hierarchy

5.5.2. The various waste management options are categorised in terms of preference from an environmental viewpoint. The options considered to be most preferable have the least environmental impacts and are more sustainable in the long term. The waste management hierarchy is as follows:

- Avoidance and reduction;
- Re-use of materials;
- Recovery and recycling; and
- Treatment and disposal.

5.5.3. The above hierarchy is used to evaluate and select waste management options. The aim is to reduce waste generation and reduce waste handling and disposal costs. Good site practices and mitigation measures recommended shall be implemented:-

- Nomination of approved personnel to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site;
- Training of site personnel in proper waste management and chemical handling

procedures;

- Provision of sufficient waste disposal points and regular collection for disposal;
- Adoption of appropriate measures to reduce windblown/ floating litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;
- Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre; and
- A recording system for the amount of wastes generated, recycled and disposed of and the disposal sites.

Waste Reduction Measures

5.5.4. Good management and control can prevent the generation of significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:

- Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance re-use or recycling of waste materials and their proper disposal;
- Encourage collection of aluminum cans and waste paper by individual collectors during construction with separate labelled bins provided to segregate these wastes from other general refuse by the workforce;
- Any unused chemicals, and those with remaining functional capacity, shall be prioritized to recycle;
- Use of reusable non-timber formwork to reduce the amount of C&D materials;
- Prior to disposal of C&D materials, wood, steel and other metals will be separated, to the extent practical for re-use and/or recycling to reduce the quantity of waste to be disposed in a landfill;
- Proper storage and site practices to reduce the potential for damage or contamination of construction materials; and
- Plan and stock construction materials carefully to reduce amount of waste generated and avoid unnecessary generation of waste.

Measures for Management of C&D Materials

5.5.5. C&D materials will be segregated on-site into public fill and non-inert C&D materials and stored in different containers or skips to facilitate re-use of the public fill and proper disposal of the non-inert C&D materials. Specific areas within the construction sites will be designated for such segregation and storage, if immediate re-use is not

practicable. The C&D materials generated during the construction phase will be transported by trucks with cover or enclosed containers to minimize the potential environmental impact. Trip ticket system will be adopted to avoid illegal dumping. GPS monitoring on dump trucks will be considered to include as one of the contractual requirements for contractors.

Measures for Management of Chemical Waste & Other Waste

5.5.6. The Contractor will register as a chemical waste producer with the EPD. Chemical waste will be handled in accordance with the *Code of Practice on the Packaging, Handling and Storage of Chemical Wastes* as listed below.

5.5.7. Chemical waste will be disposed of:

- Via a licensed waste collector; and
- To a facility licensed to receive chemical waste, such as the CWTC which also offers a chemical waste collection service.

Measures for Management of General Refuse

5.5.8. General refuse will be stored in enclosed bins and delivered separately from C&D materials for offsite disposal on a daily basis to reduce odour, pest and litter impacts.

5.5.9. Recycling bins will be provided at strategic locations within the construction site to facilitate recovery of recyclable materials (including aluminium can, waste paper, glass bottles and plastic bottles) from the construction site. Materials recovered will be sold for recycling.

5.5.10. Recycling bins will be provided at strategic locations in the Proposed Development to facilitate recovery of recyclable materials (including aluminium can, waste paper, glass bottles and plastic bottles, food waste) during operation stage. Food waste, with potential odour nuisance and hygiene problems, is suggested to collect and send to the O Park in a daily basis. Materials recovered will be collected by the recyclers appointed by the facility management team.

5.6. CONCLUSION

5.6.1. The potential impacts of wastes arising from construction and operation of the Proposed Development have been assessed. With the recommended procedures/ measures in place, the wastes generated/ disposed of during the construction and operation phases should not be result in any adverse environmental impacts.

6. LAND CONTAMINATION

6.1. INTRODUCTION

6.1.1. The potential environmental issues associated with land contamination have been reviewed and are presented in this section. The implications of land contamination for the proposed land uses in the Project Site have been assessed.

6.2. RELEVANT LEGISLATION, STANDARDS AND GUIDELINES

6.2.1. The relevant legislation, standards and guidelines applicable to the present review of land contamination include:

- Guidance Note for Contaminated Land Assessment and Remediation;
- Practice Guide for Investigation and Remediation of Contaminated Land;
- Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management.

6.3. ACQUISITION OF LOCAL AUTHORITY

6.3.1. The following HKSAR Government Departments have been enquired on the latest update on the availability of land use status and records of land contamination and/or spillage for the site. The summary of correspondence is presented in **Table 6.1** below. Copy of the letters replied from various Government Departments are included in **Appendix 6.1** for reference.

Table 6.1 Enquiries and Responses on Land Contamination Related Records

Consultant's Letter Ref.	Department	Response Date	Summary
W25185/RCHE-0002	Environmental Protection Department	3 Jul 2025	No record of chemical spillage/ leakage within the site boundary in the past ten years. No record of registered chemical waste producers was found on 10/7/2025 during the visit to the EPD Territory Control Office.
W25185/RCHE-0001	Fire Services Department	24 Jul 2025	No record of chemical spillage/ leakage, Dangerous Goods licence, fire incidents, or related incident records were found within the site boundary in the past three years.

6.4. SITE HISTORY

6.4.1. Selected historical aerial photographs between year 1977 and 2024 of the Project Site have been reviewed in order to ascertain any historical land uses with the potential for land contamination. The historical photographs in 1977, 1988, 1992, 2005, 2018, 2019, 2021 and 2024 are provided in **Figure 6.1** to indicate the past land use. Referring to **Table 6.2**, the Project Site was used as farmland in late 1970s to 1990s. Later, the land use was vacant and covered with vegetation till 2018. Afterwards, the land was converted to an open storage area in 2019 till 2021. The land was vacant again in 2024.

6.4.2. Before 2019, no potentially polluting activities were carried out in the Project Site. Vegetation on the ground was removed, and the ground remains unpaved since 2019. From 2019 to 2021, there were construction materials and construction equipment, such as metal steel, and casing, stored at the Project Site. The stored materials are mostly inert materials with low land contamination risk and have been removed since 2024. Due to short period of time for open storage use, no land contamination were anticipated.

Table 6.2 Chronological Changes in Land Use Activities of the Project Site

Year	Land Use Condition/ Activities
1977	Farmland
1988	Farmland
1992	Farmland
2005	Vacant land covered with vegetation
2018	Vacant land covered with vegetation
2019	Open Storage Area
2021	Open Storage Area
2024	Vacant land

6.5. CONCLUSION

6.5.1. The potential issues on land contamination of the Proposed Development have been assessed. Based on the aerial photographs and responses from HKSAR Government Departments, the Project Site should unlikely to have any previous land contamination history. Hence, it is anticipated that no potentially contaminating activities have been carried out and no potential sources and signs of contamination have been discovered.

7. CONCLUSION

7.1.1. The Project is to construct a 3-storey RCHE dormitory and communal area. This EA Report addressed the potential environmental issues arising from the construction and operation of the Proposed Scheme, which include the air quality, noise, water quality, waste and land comtamination.

7.1.2. With the recommended environmental mitigation measures in place, no unacceptable environmental impact on or arising from the Proposed Scheme is anticipated.

FIGURE 1.1
LOCATION OF PROJECT SITE

LEGEND:

Site Boundary

300/500m Assessment Area

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250530	20250530	20250530

Project Title

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DrawingTitle

PROPOSED DEVELOPMENT LOCATION

Drawing No.	Rev.
FIGURE 1	0

Scale:

A4 - 1:5500

BXG

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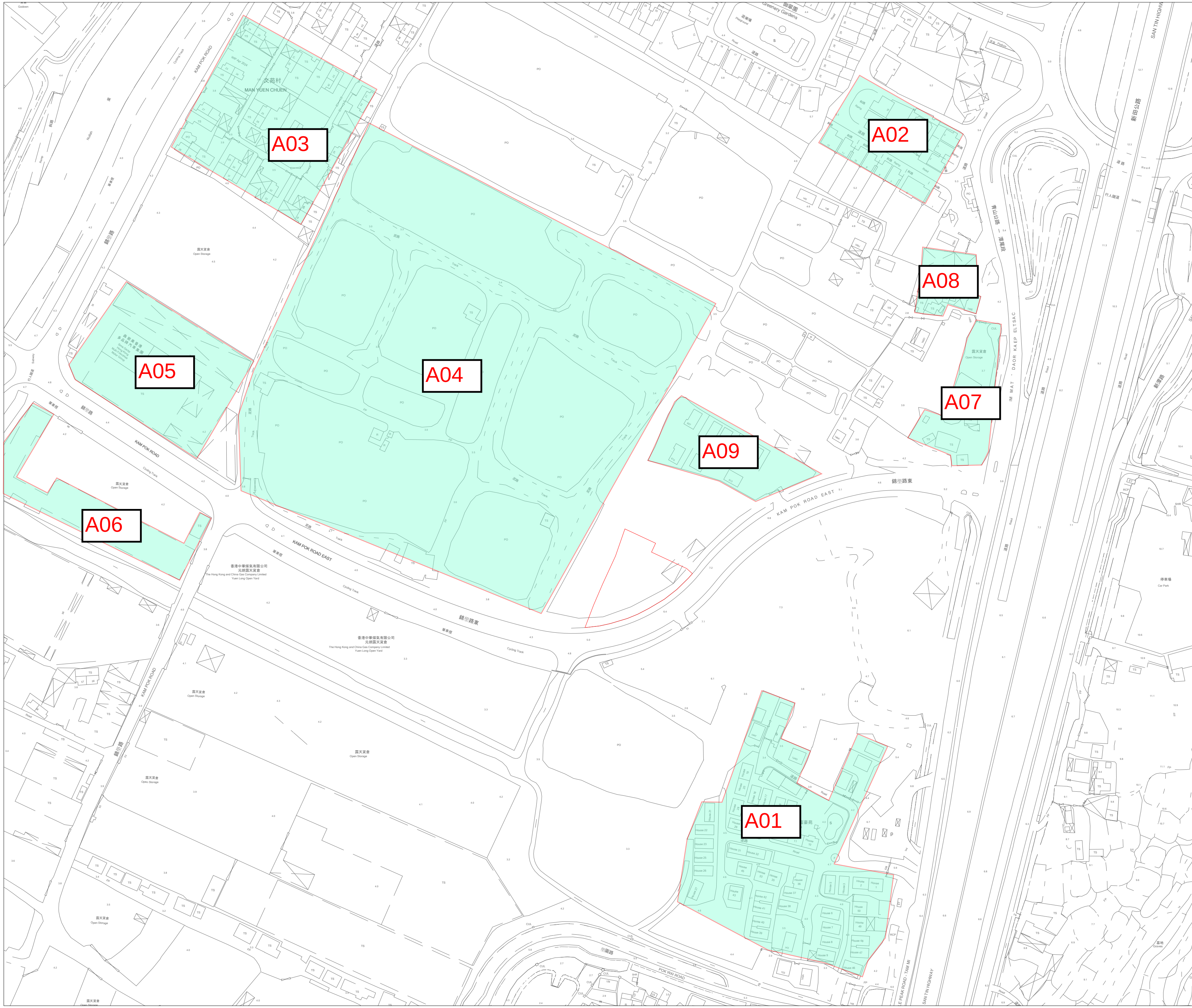
FIGURE 2.1
LOCATION OF REPRESENTATIVE AIR SENSITIVE RECEIVERS



LEGEND:

Site Boundary

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250530	20250530	20250530

Project Title

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DrawingTitle

LOCATION OF REPRESENTATIVE AIR SENSITIVE RECEIVERS

Drawing No.

FIGURE 2.1

Rev.

0

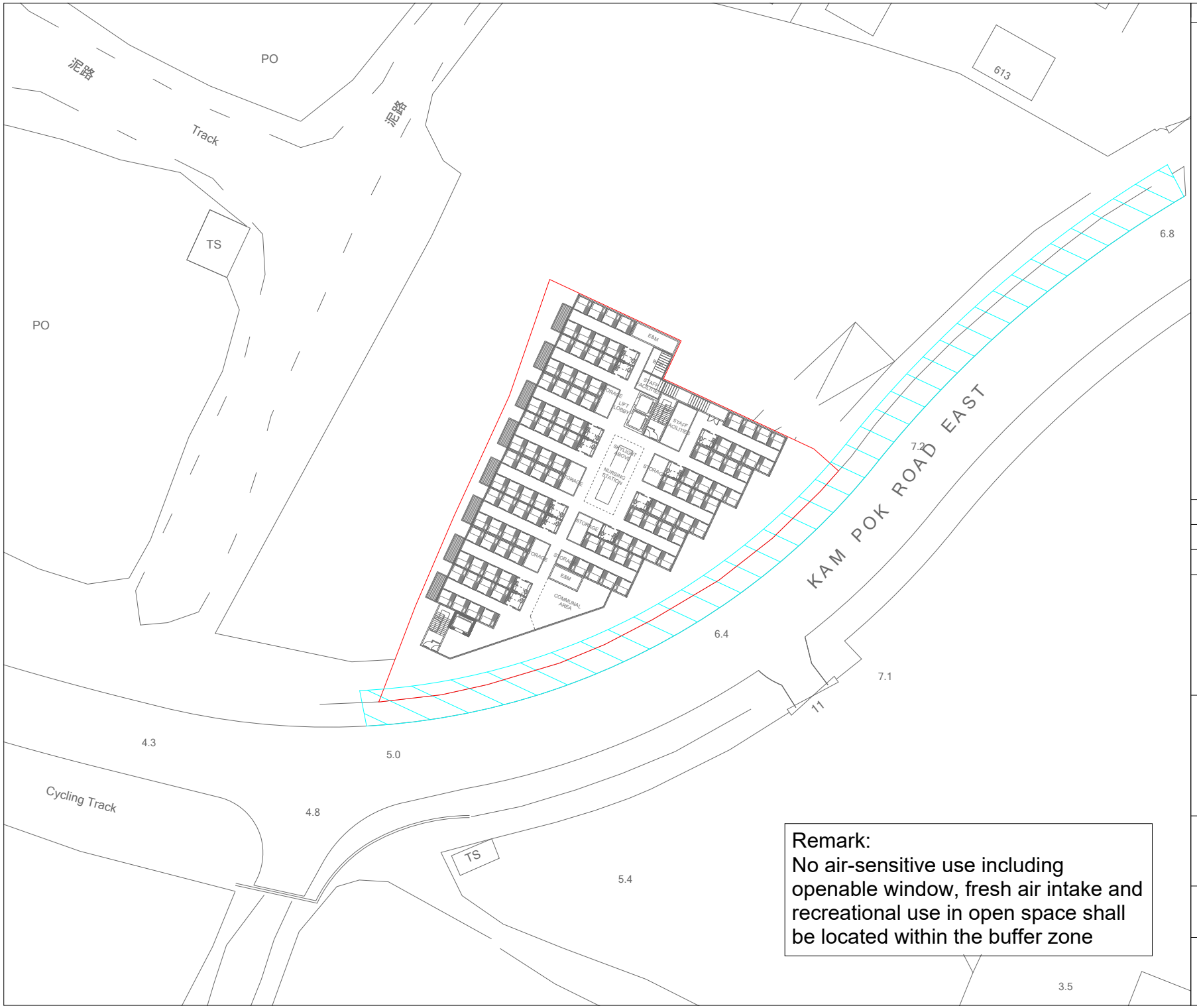
Scale:

A4 - 1:3000

BXG

BeeXergy Consulting Limited

FIGURE 2.2
BUFFER DISTANCES



Remark:
No air-sensitive use including openable window, fresh air intake and recreational use in open space shall be located within the buffer zone

LEGEND:

Site Boundary

5m Buffer Distance

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250707	20250707	20250707

Project Title

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DrawingTitle

BUFFER DISTANCE

Drawing No.

FIGURE 2.2

Rev.

0

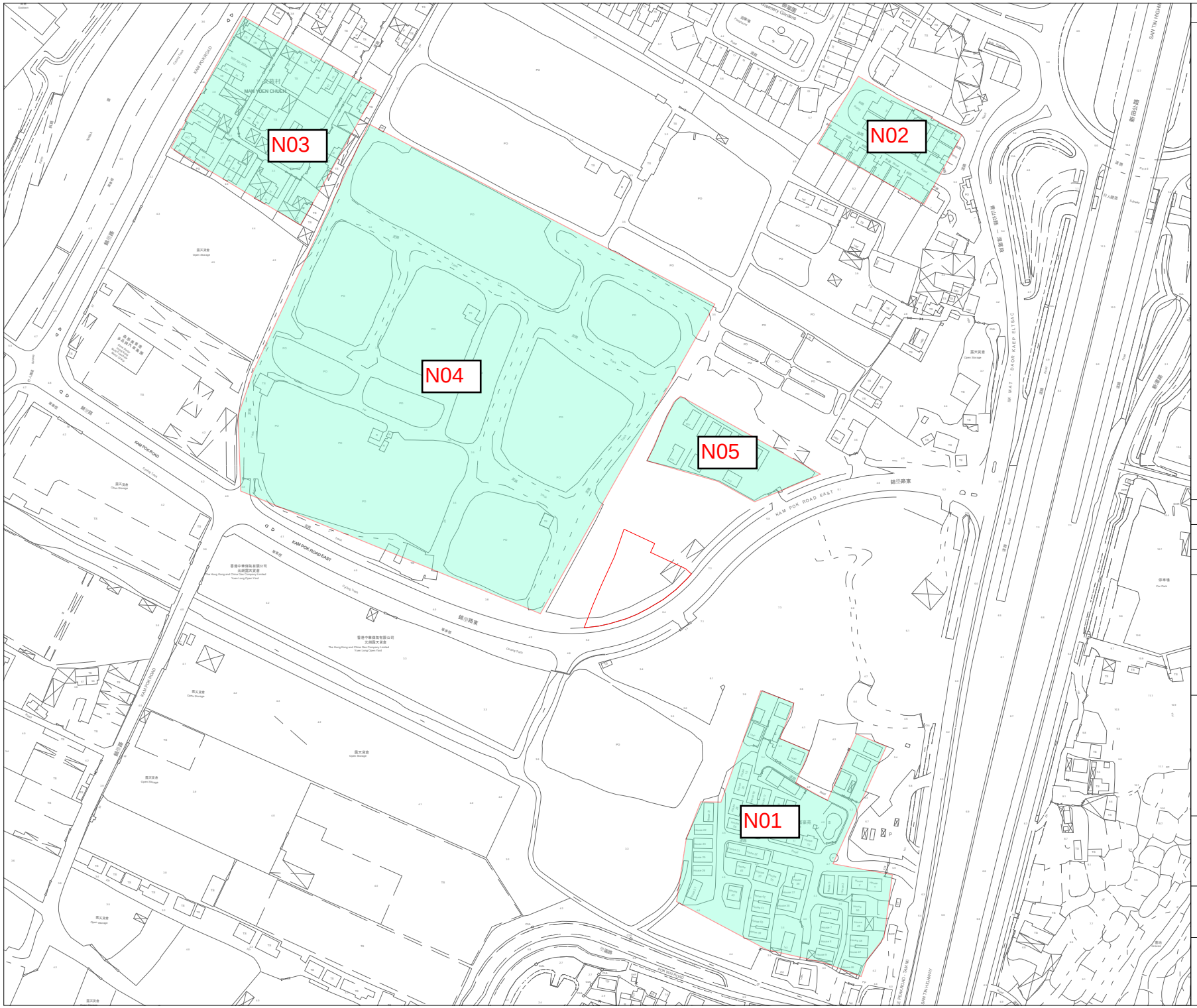
Scale:

A4 - 1:700

BXG

BeeXergy Consulting Limited

FIGURE 3.1
LOCATION OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS



LEGEND:

Site Boundary

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250530	20250530	20250530

Project Title

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DrawingTitle

LOCATION OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS

Drawing No.	Rev.
FIGURE 3.1	0

Scale:

A4 - 1:3000

BXG

BeeXergy Consulting Limited

FIGURE 3.2
LOCATION OF REPRESENTATIVE TRAFFIC NOISE SENSITIVE RECEIVERS

LEGEND:

Project Site

Noise Sensitive Receiver

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250526	20250526	20250526

Project Title

PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG

Figure Title

Location of Representative Traffic Noise Sensitive Receivers (G/F)

Figure No.	**Rev.**
Figure 3.2a	0

BXG

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LEGEND:

Project Site

Noise Sensitive Receiver

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250930	20250930	20250930

Project Title

PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG

Figure Title

Location of Representative Traffic Noise Sensitive Receivers (1/F)

Figure No.	**Rev.**
Figure 3.2b	0

BXG

BeeXergy Consulting Limited

LEGEND:

Project Site

Noise Sensitive Receiver

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250930	20250930	20250930

Project Title

PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG

Figure Title

Location of Representative Traffic Noise Sensitive Receivers (2/F)

Figure No.	**Rev.**
Figure 3.2c	0

BXG

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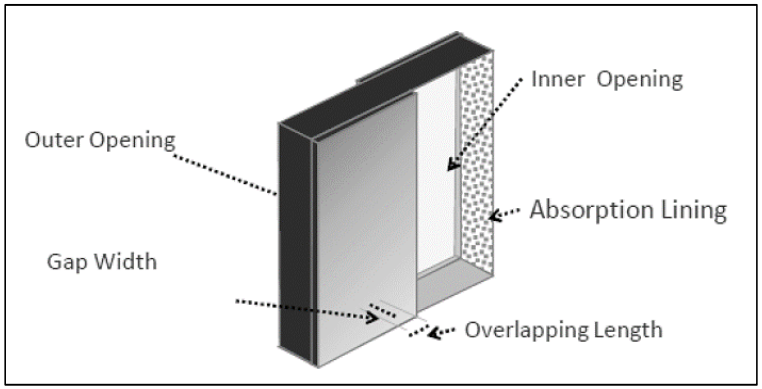
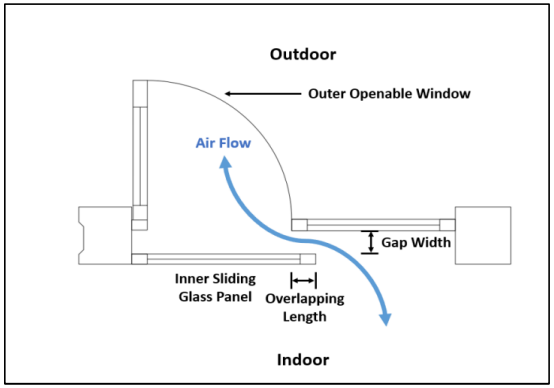
FIGURE 3.3
LOCATION OF PROPOSED ACOUSTIC WINDOW

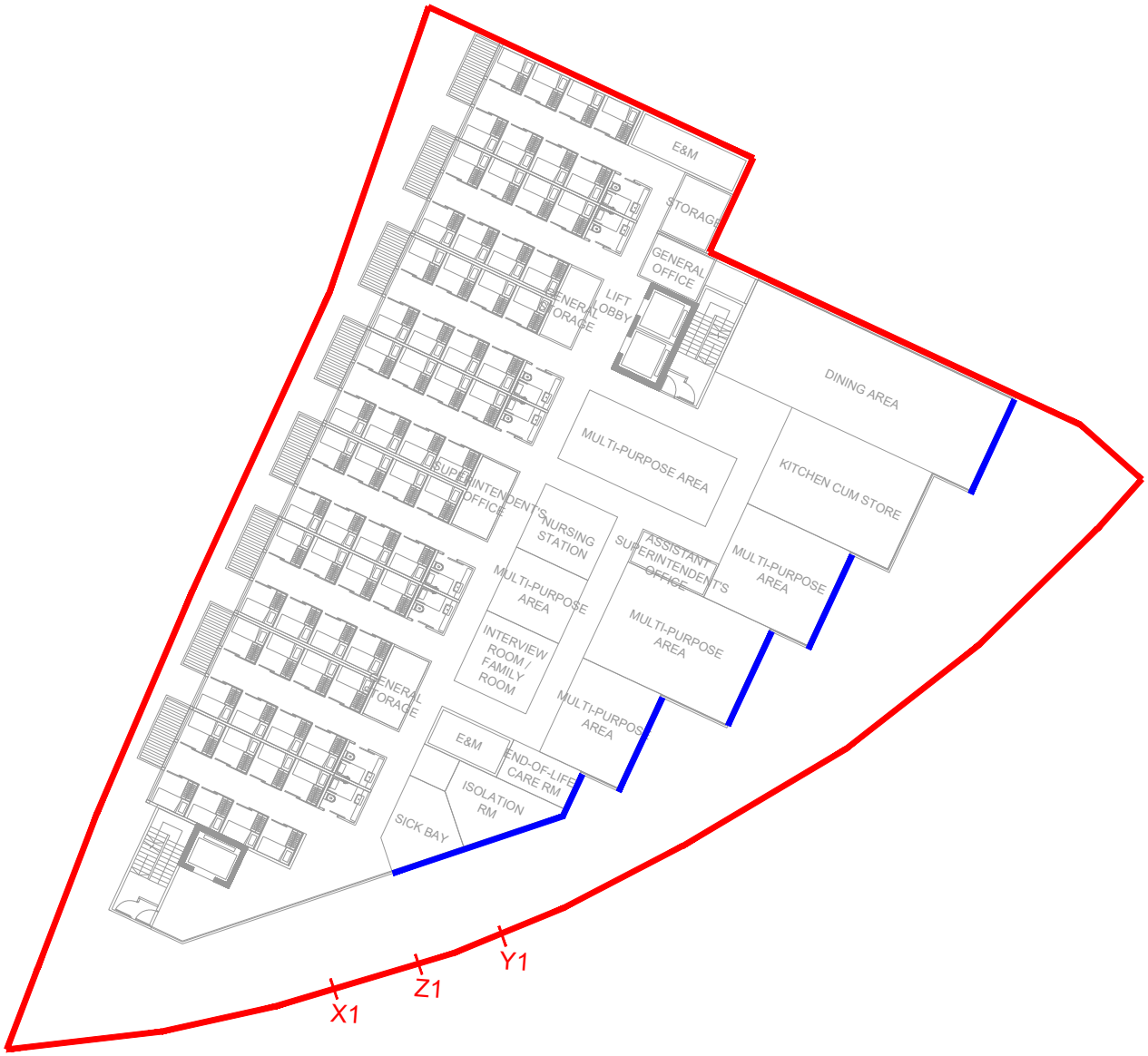
Proposed Types of Acoustic Window (Baffle Type)

Type of AW(BT)	Reference Case	Room Area, m^2	Noise Attenuation, dB(A)	Inner Window Opening, mm		Outer Window Opening, mm		Window Overlapping Length, mm	Window Pane Separation, mm	MPA[1] Applied?
				Height	Width	Height	Width			
Type 1	EPD	8	6	870	580	870	600	100	100	No
Type 2	EPD	18	7	1500	750	1500	750	100	100	No

Notes:
[1] MPA: Micro-Perforated Absorber







LEGEND:

Project Site

Type 2 AW (BT)

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250526	20250526	20250526

Project Title

PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG

Figure Title

Location of Proposed Acoustic Window (1/F)

Figure No.	**Rev.**
Figure 3.3a	0

BXG

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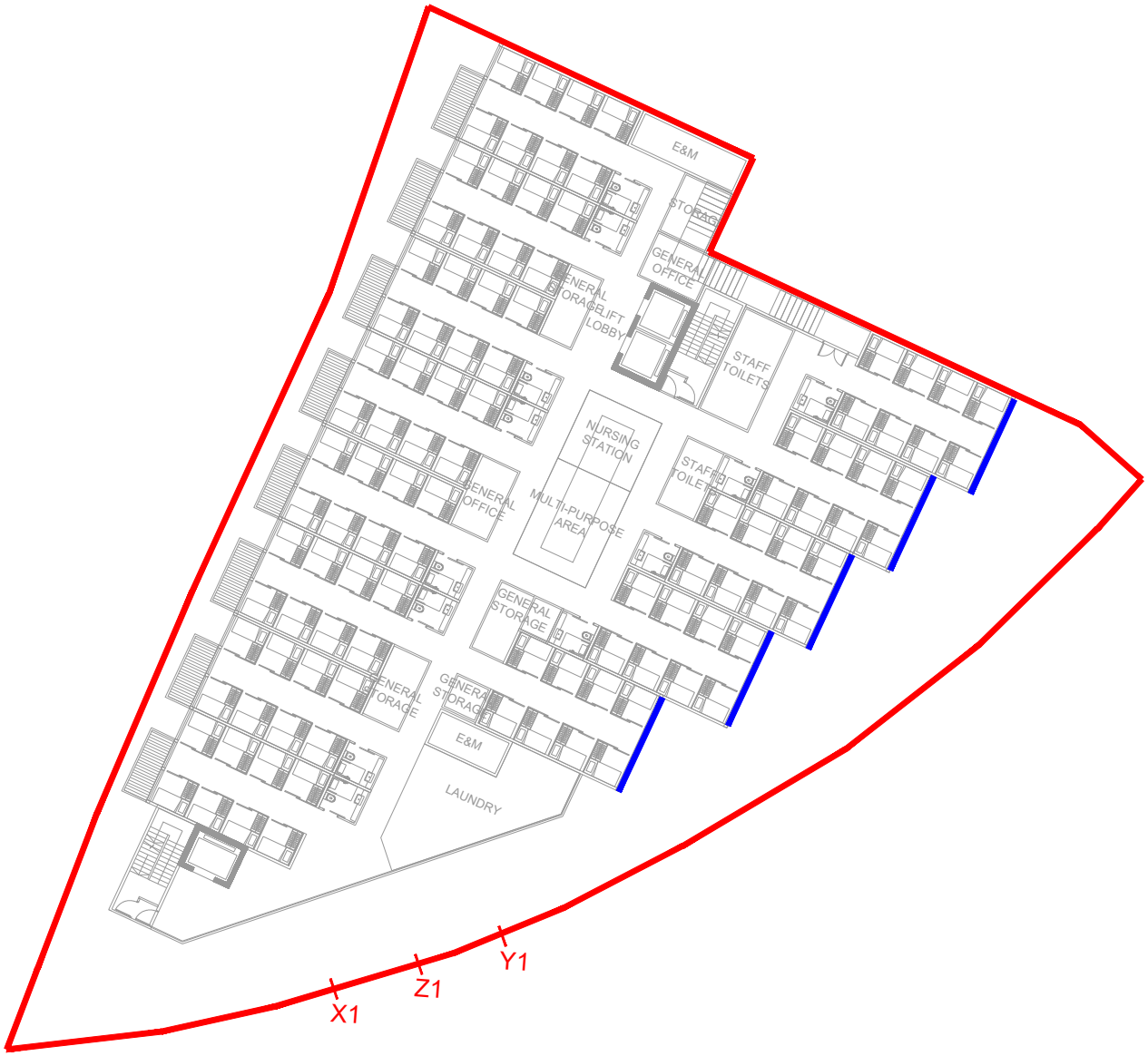

LEGEND:

Project Site

Type 2 AW (BT)

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250930	20250930	20250930

Project Title

PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG

Figure Title

Location of Proposed Acoustic Window (2/F)

Figure No.	**Rev.**
Figure 3.3b	0

BXG

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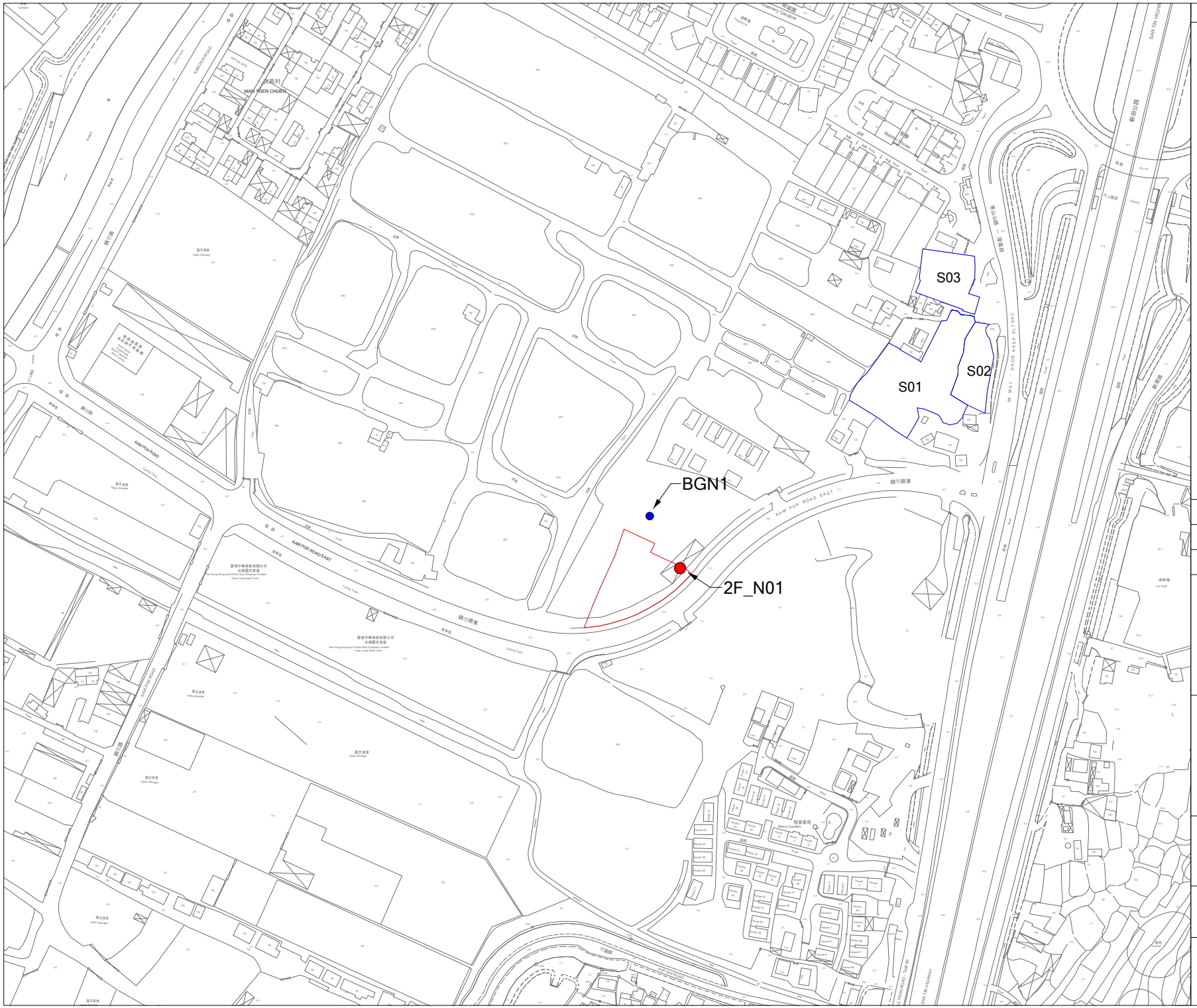
FIGURE 3.4

LOCATION OF BACKGROUND NOISE MEASUREMENT AND MAJOR FIXED NOISE SOURCES



LEGEND:

- Site Boundary
- Major Fixed Noise Sources
- Background Noise Measurement Location
- Representative NSRs

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250915	20250915	20250915

Project Title

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DrawingTitle

LOCATION OF BACKGROUND NOISE MEASUREMENT AND MAJOR FIXED NOISE SOURCES

Drawing No.	Rev.
FIGURE 3.4	0

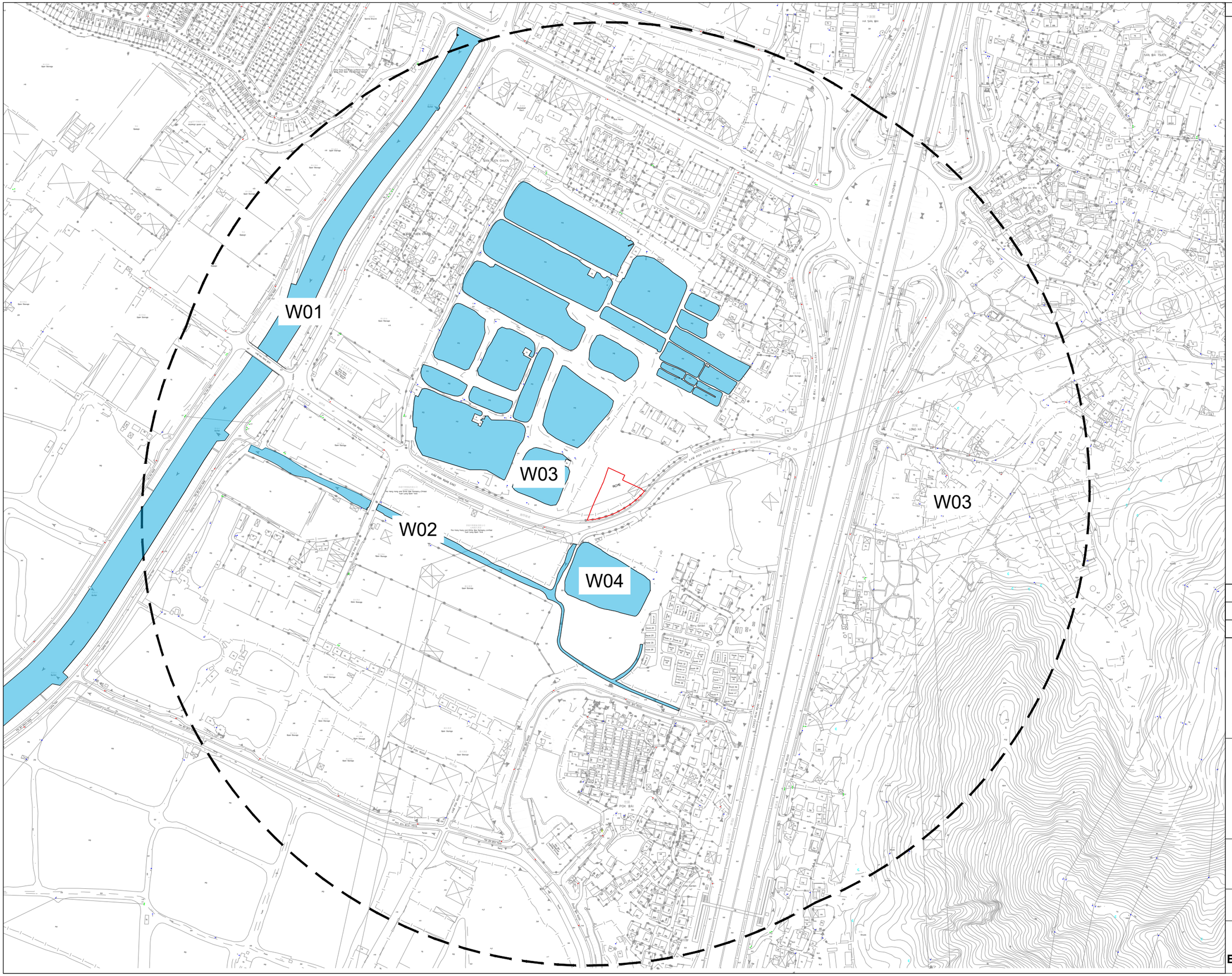
Scale:

A4 - 1:3000

BXG

BeeXergy Consulting Limited

FIGURE 4.1
LOCATION OF WATER SENSITIVE RECEIVER



Project Site

500m Assessment Boundary

Water Sensitive Receiver

	Prepared	Checked	Approved
Initial	Various	TL	HM
Date	20250923	20250923	20250923

Project Title

PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG

Drawing Title

Location of Water Sensitive Receiver

Drawing No.	Rev.
Figure 4.1	1

Scale: A3

BeeXergy Consulting Limited

FIGURE 6.1
AERIAL PHOTOS

LEGEND:

Site Boundary

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250630	20250630	20250630

Project Title

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DrawingTitle

AERIAL PHOTOS

Drawing No.

FIGURE 6.1a

Rev.

0

Scale:

A4 - N.T.S

BXG

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LEGEND:

Site Boundary

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250630	20250630	20250630

Project Title

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DrawingTitle

AERIAL PHOTOS

Drawing No.

FIGURE 6.1b

Rev.

0

Scale:

A4 - N.T.S

BXG

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APPENDIX 1.1
INDICATIVE BUILDING PLAN

NOTES:

LEGEND:

THE SITE

EVA

GOVERNMENT LAND

OVERHEAD LINES

EXISTING NOISE BARRIER

PROPOSED RCHD
UNDER SEPARATE APPLICATION

KAM POK ROAD EAST

TOTAL FACADE LENGTH = 168.0
EFFECTIVE LENGTH COVERED BY
EVA = 51.73 = 30.8% >25%

X1 Z1 Y1

- EVA PLAN
KAM POK ROAD E RCHE 1:400 @ A3

REV	DATE	DESCRIPTION	BY	CHKD
A	22.9.2025	CONCEPT DESIGN	KC	PC
-	5.5.2025	CONCEPT DESIGN	KC	PC

Do not scale from drawings. All dimensions must be checked and verified on site before any works are undertaken. Any discrepancies must be reported in writing to Architect.

CLIENT

.

TOWN PLANNER

DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

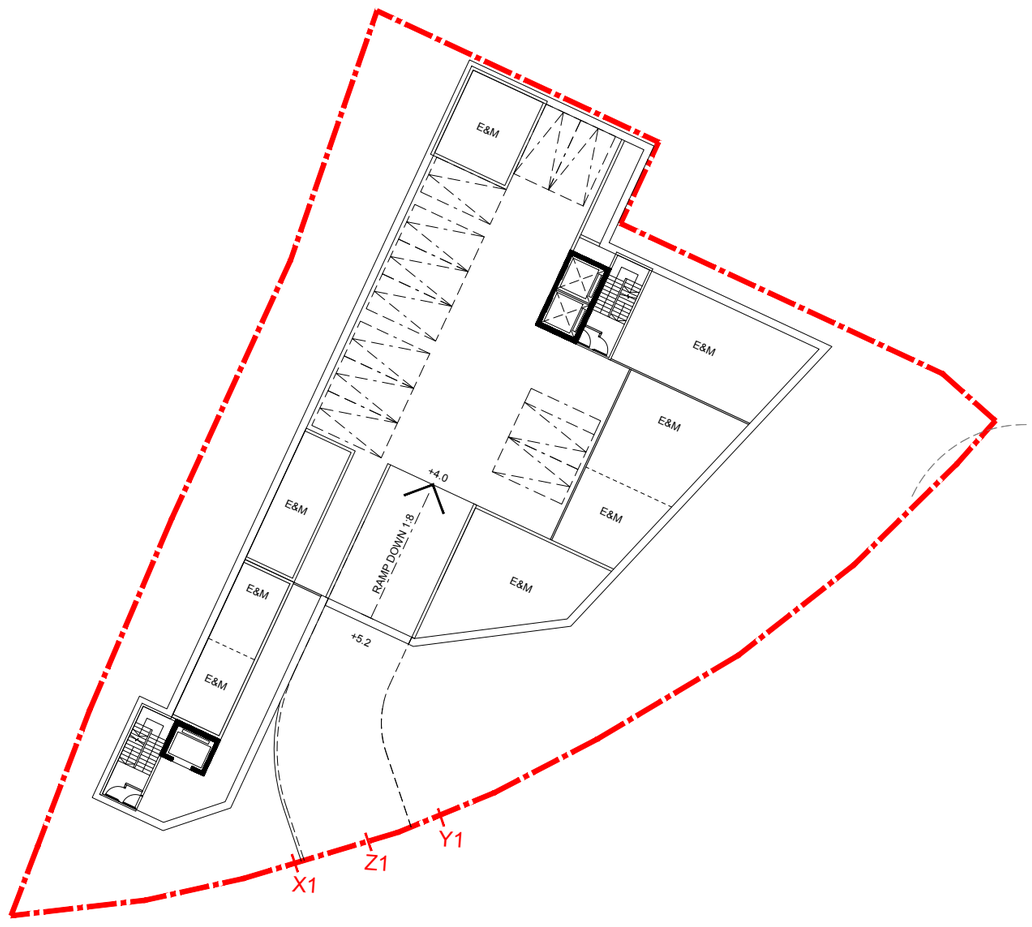
Syn Plus

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : EVA PLAN

SCALE : 1:400 @A3
PROJECT NO : 25001_KPR
Rev: A

Drawing No. : FIGURE 2
Date: MAY 2025



- BASEMENT FLOOR PLAN
KAM POK ROAD E RCHE 1:400 @ A3

NOTES:

REV	DATE	DESCRIPTION	BY	CHKD
A	9.7.2025	CONCEPT DESIGN	KC	PC
-	5.5.2025	CONCEPT DESIGN	KC	PC

Do not scale from drawings. All dimensions must be checked and verified on site before any works are undertaken. Any discrepancies must be reported in writing to Architect.

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TOWN PLANNER

DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : BASEMENT FLOOR PLAN

SCALE : 1: 400 @A3
PROJECT NO : 25001_KPR
Rev: —

Drawing No. : CP-B102
Date: MAY 2025

NOTES:

LEGEND:

PROPOSED PEDESTRIAN ACCESS

REV	DATE	DESCRIPTION	BY	CHKD
B	22.9.2025	CONCEPT DESIGN	KC	PC
A	9.7.2025	CONCEPT DESIGN	KC	PC
-	5.5.2025	CONCEPT DESIGN	KC	PC

Do not scale from drawings. All dimensions must be checked and verified on site before any works are undertaken. Any discrepancies must be reported in writing to Architect.

CLIENT

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TOWN PLANNER

DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

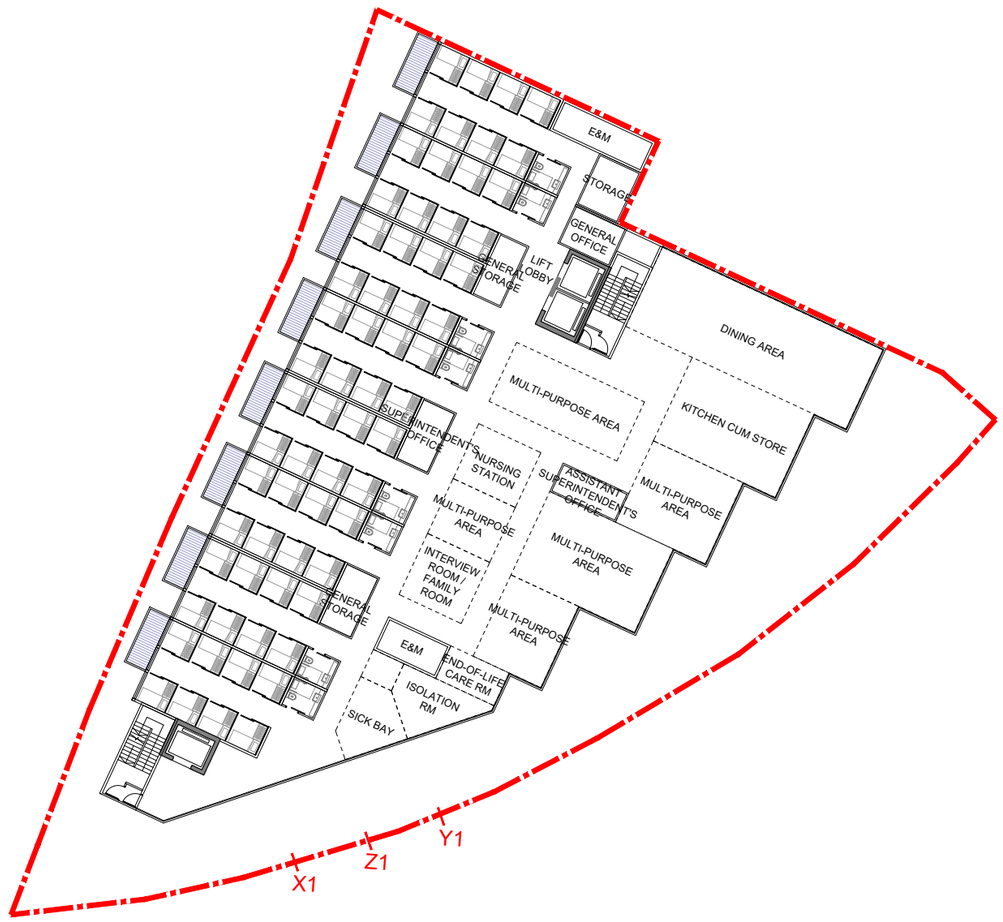
PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : GROUND FLOOR PLAN

SCALE : 1:400 @A3
PROJECT NO : 25001_KPR
Rev: B

Drawing No. : CP-B103
Date: MAY 2025

- GROUND FLOOR PLAN
KAM POK ROAD E RCHE 1:400 @ A3



- 1ST FLOOR PLAN
KAM POK ROAD E RCHE 1:400 @ A3

NOTES:

PROPOSED BALCONIES

REV	DATE	DESCRIPTION	BY	CHKD
A	9.7.2025	CONCEPT DESIGN	KC	PC
-	5.5.2025	CONCEPT DESIGN	KC	PC

Do not scale from drawings. All dimensions must be checked and verified on site before any works are undertaken. Any discrepancies must be reported in writing to Architect.

CLIENT

.

TOWN PLANNER

DeSPACE (International) Limited

ARCHITECT

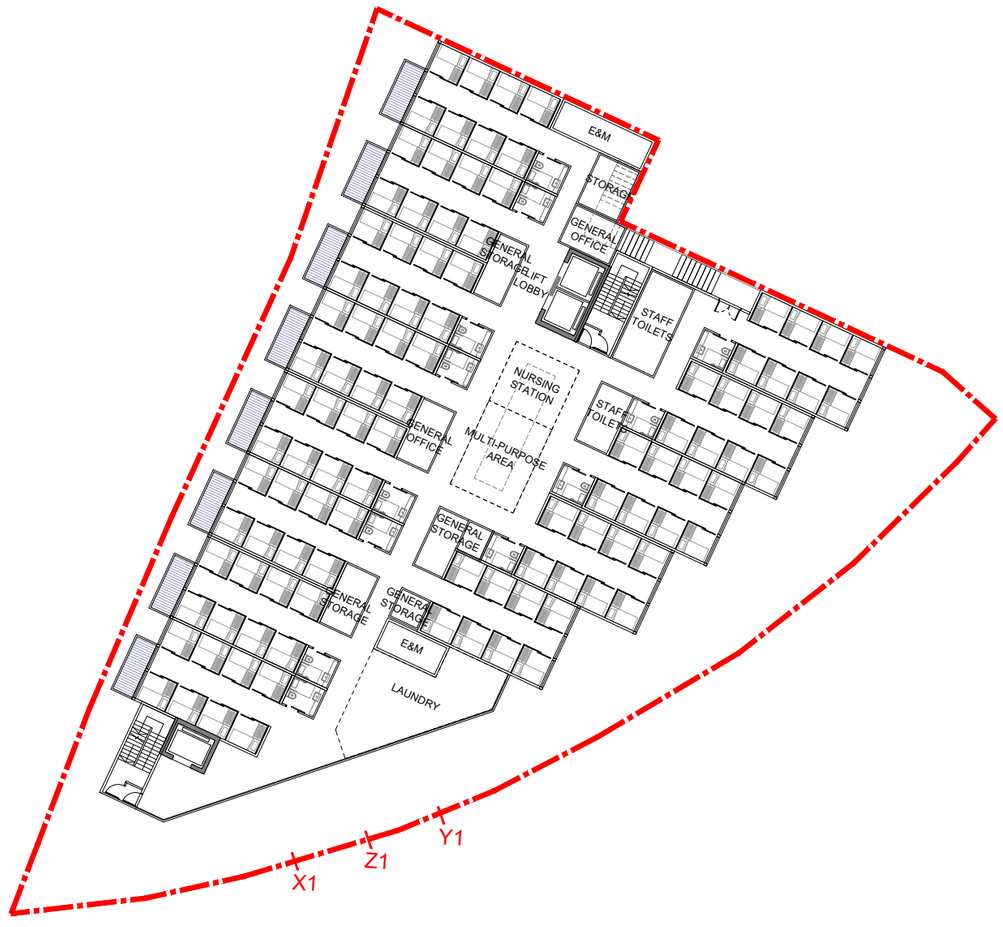
Vessel International Limited
Syn Plus Design Limited

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : FIRST FLOOR PLAN

SCALE : 1:400 @A3
PROJECT NO : 25001_KPR
Rev: -

Drawing No. : CP-B104
Date: MAY 2025



- 2ND FLOOR PLAN
KAM POK ROAD E RCHE 1:400 @ A3

NOTES:

PROPOSED BALCONIES

REV	DATE	DESCRIPTION	BY	CHKD
A	9.7.2025	CONCEPT DESIGN	KC	PC
-	5.5.2025	CONCEPT DESIGN	KC	PC

Do not scale from drawings. All dimensions must be checked and verified on site before any works are undertaken. Any discrepancies must be reported in writing to Architect.

CLIENT

.

TOWN PLANNER

DeSPACE (International) Limited

DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

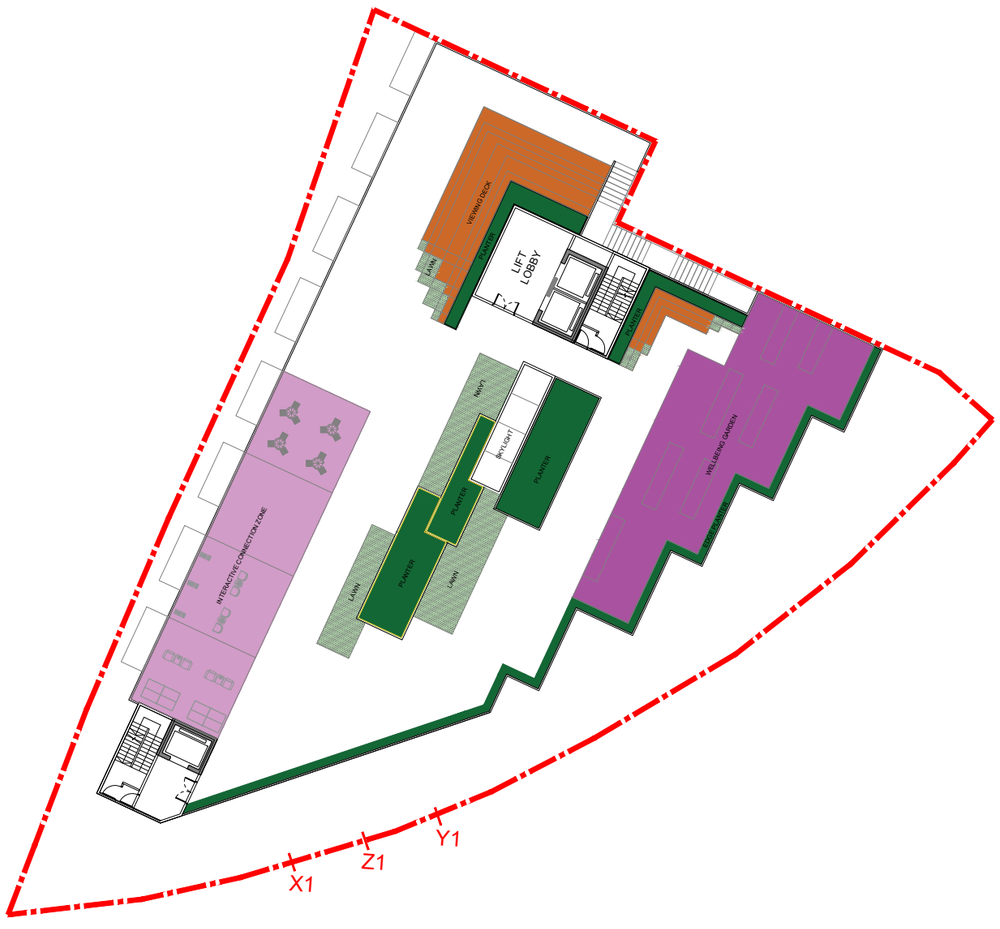
Syn Plus

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : SECOND FLOOR PLAN

SCALE : 1:400 @A3
PROJECT NO : 25001_KPR
Rev: -

Drawing No. :
CP-B105
Date: MAY 2025



- ROOF PLAN

KAM POK ROAD E RCHE 1:400 @ A3

NOTES:

PROPOSED PLANTERS

PROPOSED LAWN

PROPOSED SKYLIGHT

PROPOSED WELLBEING GARDEN

PROPOSED VIEWING DECK

PROPOSED INTERACTIVE CONNECTION ZONE

REV	DATE	DESCRIPTION	BY	CHKD
-	5.5.2025	CONCEPT DESIGN	KC	PC

Do not scale from drawings. All dimensions must be checked and verified on site before any works are undertaken. Any discrepancies must be reported in writing to Architect.

CLIENT

.

TOWN PLANNER

DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : ROOF PLAN

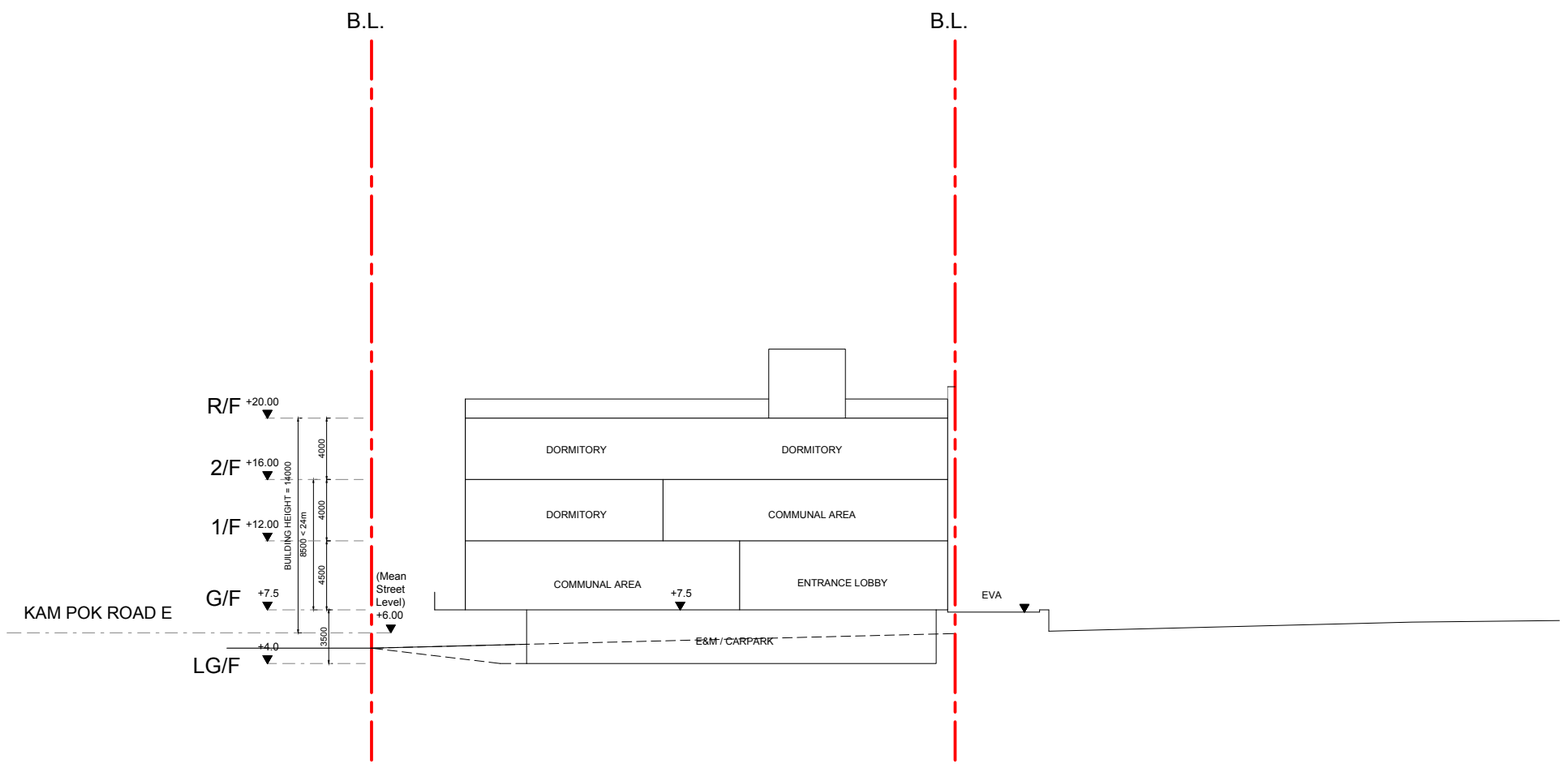
SCALE : 1:400 @A3

PROJECT NO : 25001_KPR

Rev: -

Drawing No. : CP-B106

Date: MAY 2025



- SCHEMATIC SECTION
KAM POK ROAD E RCHE 1:400 @ A3

NOTES:

REV	DATE	DESCRIPTION	BY	CHKD
-	5.5.2025	CONCEPT DESIGN	KC	PC

Do not scale from drawings. All dimensions must be checked and verified on site before any works are undertaken. Any discrepancies must be reported in writing to Architect.

CLIENT

.

TOWN PLANNER

DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : SCHEMATIC SECTION

SCALE : 1:400 @A3
PROJECT NO : 25001_KPR
Rev: —

Drawing No. : CP-B201
Date: MAY 2025

APPENDIX 2.1
TD'S ENDORSEMENT ON THE ROAD TYPE

From: Chi Kong LEUNG <chikongleung@td.gov.hk>
Sent: Tuesday, September 2, 2025 4:50 PM
To: CKM Asia
Cc: Vincent Ming Kin LAI
Subject: Re: Section 16 Planning Application No. A/YL-NSW/348 and A/YL-NSW/349
Attachments: item 1 - comments from EPD.PDF

Dear Tommy,

Your preceding email refers.

TD has no comment on your interpretation of the road type classification on Kam Pok Road and Kam Pok Road East.

Thank you.

Regards,
Donald Leung
E/BP, TE/NTW
Transport Department
Tel. 2399 2778

From: "CKM Asia" <[redacted]>
To: "chikongleung@td.gov.hk" <chikongleung@td.gov.hk>
Date: 02/09/2025 01:48 PM
Subject: Section 16 Planning Application No. A/YL-NSW/348 and A/YL-NSW/349

Attn: Transport Department – Mr. LEUNG Chi Kong, Donald (Engr/Boundary Projects)
Dear Donald,

As per our discussion this morning, Environmental Protection Department in their comment for the captioned project (see item 7 in attached **item 1**), requested for road type for Kam Pok Road East.

We refer to the Annual Traffic Census from Transport Department, Castle Peak Road – Tam Mi is classified as a Rural Road. With the consideration of the road connection with Castle Peak Road – Tam Mi, we have assumed as follows:

1) Kam Pok Road East – Rural Road
2) Kam Pok Road – Rural Road

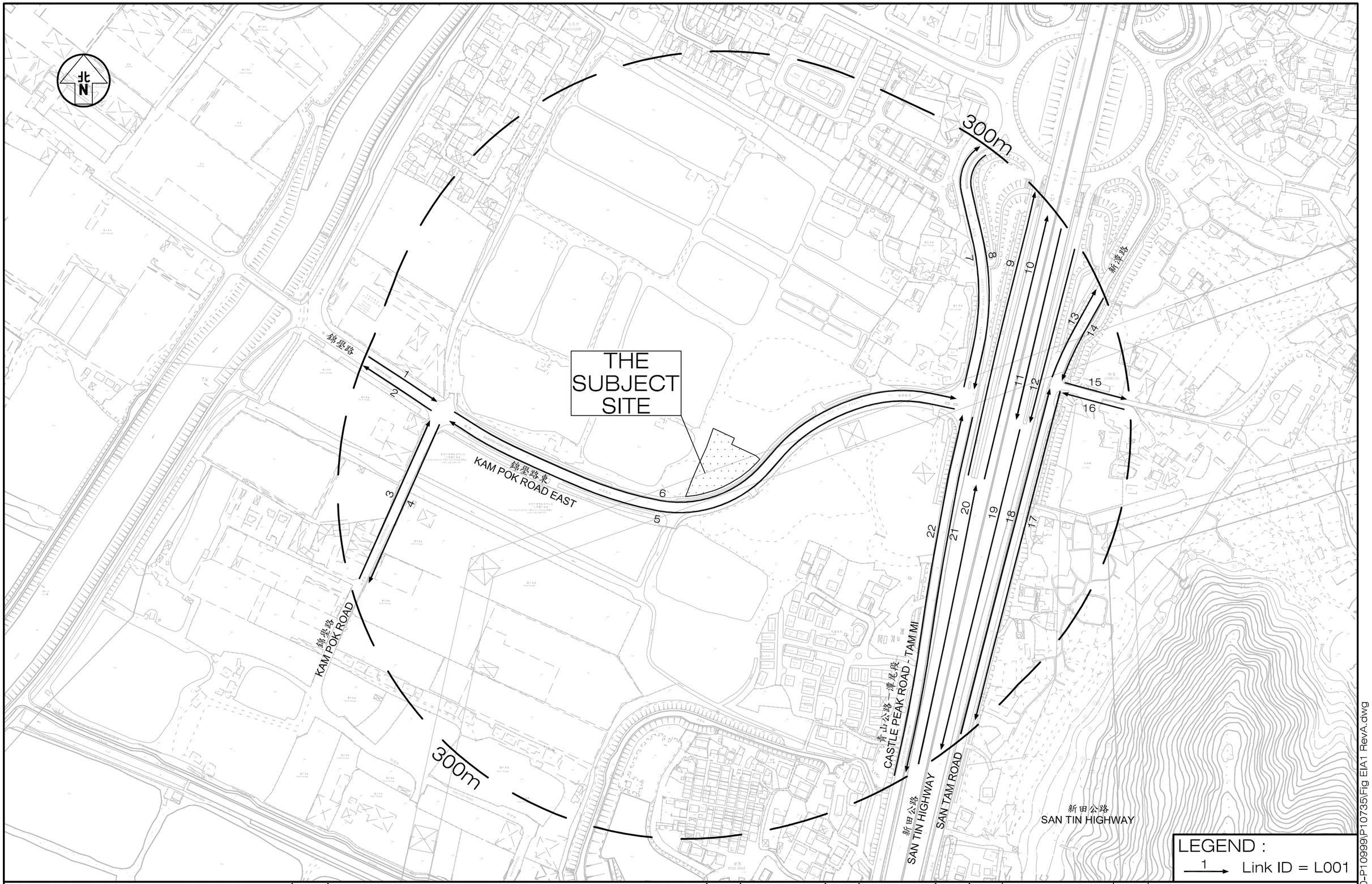
It is much appreciated if you could confirm if you agree to the road types above. Should you have any queries, please do not hesitate to contact the undersigned.

Thank you for your attention.

Regards,

Tommy Law
CKM Asia Limited
Traffic and Transportation Planning Consultant
[redacted]

APPENDIX 3.1
TRAFFIC FORECAST DATA



Project Title

PROPOSED SOCIAL WELFARE FACILITIES (RCHE) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG

J7401

Figure Title

LOCATION OF TRAFFIC DATA

Figure No.	Revision
EIA1	A

Designed by	Drawn by	Checked by
K C	C C L	–

Scale in A3	Date
1 : 3,000	26 MAY 2025

CKM Asia Limited
Traffic and Transportation Planning Consultants

[redacted]

T:\Proposal\P10000-P10999\P10735\Fig EIA1 RevA.dwg

YEAR 2045 TRAFFIC FORECAST

Date: 24 Dec 2025 **Job No.: J7400 & J7401**

Link ID	Road Section	From Road	To Road	Speed Limit (kph)	Road Classification	AM Peak Hour		
						Traffic Flows (veh/hr)	Vehicle Composition	
							LV	HV
L001	Kam Pok Road (EB)	Pok Wai South Road	Kam Pok Road East	50	RR	80	43%	57%
L002	Kam Pok Road (WB)	Kam Pok Road East	Pok Wai South Road	50	RR	130	42%	58%
L003	Kam Pok Road (NB)	Pok Wai West Road	Kam Pok Road East	50	RR	80	18%	82%
L004	Kam Pok Road (SB)	Kam Pok Road East	Pok Wai West Road	50	RR	70	48%	52%
L005	Kam Pok Road East (WB)	Castle Peak Road - Tam Mi	Kam Pok Road	50	RR	170	43%	57%
L006	Kam Pok Road East (EB)	Kam Pok Road	Castle Peak Road - Tam Mi	50	RR	140	27%	73%
L007	Castle Peak Road - Tam Mi (NB)	Kam Pok Road East	Fairview Park Interchange	50	RR	510	49%	51%
L008	Castle Peak Road - Tam Mi (SB)	Fairview Park Interchange	Kam Pok Road East	50	RR	340	51%	49%
L009	San Tin Highway (NB)	San Tin Highway	Fairview Park Interchange	100	DD	970	72%	28%
L010	San Tin Highway (NB)	San Tin Highway	San Tin Highway	100	PD	4,090	68%	32%
L011	San Tin Highway (SB)	San Tin Highway	San Tin Highway	100	PD	3,910	57%	43%
L012	San Tin Highway (SB)	Fairview Park Interchange	San Tin Highway	50	DD	1,130	75%	25%
L013	San Tam Road (NB)	Unnamed Road	Fairview Park Interchange	50	RR	390	62%	38%
L014	San Tam Road (SB)	Fairview Park Interchange	Unnamed Road	50	RR	750	68%	32%
L015	Unnamed Road (EB)	San Tam Road	Cul-de-sac	50	RR	10	75%	25%
L016	Unnamed Road (WB)	Cul-de-sac	San Tam Road	50	RR	10	80%	20%
L017	San Tam Road (SB)	Unnamed Road	Fung Kat Heung Road	50	RR	750	68%	32%
L018	San Tam Road (NB)	Fung Kat Heung Road	Unnamed Road	50	RR	380	62%	38%
L019	San Tin Highway (SB)	San Tin Highway	Yuen Long Highway	100	PD	5,040	61%	39%
L020	San Tin Highway (NB)	Yuen Long Highway	San Tin Highway	100	PD	5,060	69%	31%
L021	Castle Peak Road - Tam Mi (SB)	Kam Pok Road East	Access Road to Merry Garden	50	RR	210	62%	38%
L022	Castle Peak Road - Tam Mi (NB)	Access Road to Merry Garden	Kam Pok Road East	50	RR	420	57%	43%

Note: "LV" includes motorcycle, private car and taxi

"HV" includes light / medium / heavy goods vehicle, public / private light bus, non-franchised bus and franchised bu

PD – Primary Distributor

DD – District Distributor

LD – Local Distributor

RR – Rural Road

YEAR 2045 TRAFFIC FORECAST

Date: 24 Dec 2025 **Job No.: J7400 & J7401**

Link ID	Road Section	From Road	To Road	Speed Limit (kph)	Road Classification	PM Peak Hour		
						Traffic Flows (veh/hr)	Vehicle Composition	
							LV	HV
L001	Kam Pok Road (EB)	Pok Wai South Road	Kam Pok Road East	50	RR	120	40%	60%
L002	Kam Pok Road (WB)	Kam Pok Road East	Pok Wai South Road	50	RR	100	39%	61%
L003	Kam Pok Road (NB)	Pok Wai West Road	Kam Pok Road East	50	RR	70	43%	57%
L004	Kam Pok Road (SB)	Kam Pok Road East	Pok Wai West Road	50	RR	70	20%	80%
L005	Kam Pok Road East (WB)	Castle Peak Road - Tam Mi	Kam Pok Road	50	RR	150	33%	67%
L006	Kam Pok Road East (EB)	Kam Pok Road	Castle Peak Road - Tam Mi	50	RR	170	42%	58%
L007	Castle Peak Road - Tam Mi (NB)	Kam Pok Road East	Fairview Park Interchange	50	RR	500	56%	44%
L008	Castle Peak Road - Tam Mi (SB)	Fairview Park Interchange	Kam Pok Road East	50	RR	320	51%	49%
L009	San Tin Highway (NB)	San Tin Highway	Fairview Park Interchange	100	DD	1,030	73%	27%
L010	San Tin Highway (NB)	San Tin Highway	San Tin Highway	100	PD	3,900	71%	29%
L011	San Tin Highway (SB)	San Tin Highway	San Tin Highway	100	PD	4,050	68%	32%
L012	San Tin Highway (SB)	Fairview Park Interchange	San Tin Highway	50	DD	830	76%	24%
L013	San Tam Road (NB)	Unnamed Road	Fairview Park Interchange	50	RR	380	67%	33%
L014	San Tam Road (SB)	Fairview Park Interchange	Unnamed Road	50	RR	750	66%	34%
L015	Unnamed Road (EB)	San Tam Road	Cul-de-sac	50	RR	10	100%	0%
L016	Unnamed Road (WB)	Cul-de-sac	San Tam Road	50	RR	10	100%	0%
L017	San Tam Road (SB)	Unnamed Road	Fung Kat Heung Road	50	RR	750	66%	34%
L018	San Tam Road (NB)	Fung Kat Heung Road	Unnamed Road	50	RR	380	67%	33%
L019	San Tin Highway (SB)	San Tin Highway	Yuen Long Highway	100	PD	4,870	69%	31%
L020	San Tin Highway (NB)	Yuen Long Highway	San Tin Highway	100	PD	4,930	71%	29%
L021	Castle Peak Road - Tam Mi (SB)	Kam Pok Road East	Access Road to Merry Garden	50	RR	210	62%	38%
L022	Castle Peak Road - Tam Mi (NB)	Access Road to Merry Garden	Kam Pok Road East	50	RR	390	59%	41%

Note: "LV" includes motorcycle, private car and taxi

"HV" includes light / medium / heavy goods vehicle, public / private light bus, non-franchised bus and franchised bu

PD – Primary Distributor

DD – District Distributor

LD – Local Distributor

RR – Rural Road

APPENDIX 3.2
TRAFFIC NOISE IMPACT ASSESSMENT RESULTS

Predicted Road Traffic Noise Levels for 2045 (Mitigated Case Scenario)

Floor	NAP ID	Description	Floor Height, mPD	Assessment Height, mPD	Noise Criteria, dB(A)	Unmitigated Noise Level, $L_{10\ (1\ hour)}$, dB(A)	Proposed Noise Mitigation Measures	Estimated Noise Attenuation, dB(A)	Mitigated Noise Level, $L_{10\ (1\ hour)}$, dB(A)	Compliance
						AM				
G/F	GF_N01	Rehab Zone	+7.50	+8.7	70	68	N/A	N/A	68	Yes
	GF_N02	Multi-purpose Room			70	66	N/A	N/A	66	Yes
	GF_N03	Multi-purpose Room			70	66	N/A	N/A	66	Yes
	GF_N04	RCHE Dormitory			70	66	N/A	N/A	66	Yes
	GF_N05	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	GF_N06	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	GF_N07	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	GF_N08	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	GF_N09	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	GF_N10	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	GF_N11	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	GF_N12	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	GF_N13	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	GF_N14	RCHE Dormitory			70	63	N/A	N/A	63	Yes
	GF_N15	RCHE Dormitory			70	64	N/A	N/A	64	Yes
1/F	1F_N01	Dining Area	+12.00	+13.2	70	**75**	Type 2	7	68	Yes
	1F_N03	Multi-purpose Room			70	**73**	Type 2	7	66	Yes
	1F_N04	Multi-purpose Room			70	**73**	Type 2	7	66	Yes
	1F_N05	Multi-purpose Room			70	**73**	Type 2	7	66	Yes
	1F_N06	End-of-Life Room			70	**74**	Type 2	7	67	Yes
	1F_N07	Isolation Room			70	**75**	Type 2	7	68	Yes
	1F_N08	Sick Bay			70	**75**	Type 2	7	68	Yes
	1F_N09	RCHE Dormitory			70	67	N/A	N/A	67	Yes
	1F_N10	RCHE Dormitory			70	66	N/A	N/A	66	Yes
	1F_N11	RCHE Dormitory			70	66	N/A	N/A	66	Yes
	1F_N12	RCHE Dormitory			70	66	N/A	N/A	66	Yes
	1F_N13	RCHE Dormitory			70	66	N/A	N/A	66	Yes
	1F_N14	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	1F_N15	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	1F_N16	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	1F_N17	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	1F_N18	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	1F_N19	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	1F_N20	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	1F_N21	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	1F_N22	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	1F_N23	RCHE Dormitory			70	63	N/A	N/A	63	Yes
	1F_N24	RCHE Dormitory			70	65	N/A	N/A	65	Yes
2/F	2F_N01	RCHE Dormitory	+16.00	+17.2	70	**77**	Type 2	7	70	Yes
	2F_N02	RCHE Dormitory			70	**77**	Type 2	7	70	Yes
	2F_N03	RCHE Dormitory			70	**76**	Type 2	7	69	Yes
	2F_N04	RCHE Dormitory			70	**77**	Type 2	7	70	Yes
	2F_N05	RCHE Dormitory			70	**75**	Type 2	7	68	Yes
	2F_N06	RCHE Dormitory			70	**77**	Type 2	7	70	Yes
	2F_N07	RCHE Dormitory			70	**75**	Type 2	7	68	Yes
	2F_N08	RCHE Dormitory			70	**77**	Type 2	7	70	Yes
	2F_N09	RCHE Dormitory			70	**74**	Type 2	7	67	Yes
	2F_N10	RCHE Dormitory			70	**77**	Type 2	7	70	Yes
	2F_N14	RCHE Dormitory			70	67	N/A	N/A	67	Yes
	2F_N15	RCHE Dormitory			70	67	N/A	N/A	67	Yes
	2F_N16	RCHE Dormitory			70	67	N/A	N/A	67	Yes
	2F_N17	RCHE Dormitory			70	66	N/A	N/A	66	Yes
	2F_N18	RCHE Dormitory			70	66	N/A	N/A	66	Yes
	2F_N19	RCHE Dormitory			70	66	N/A	N/A	66	Yes
	2F_N20	RCHE Dormitory			70	66	N/A	N/A	66	Yes
	2F_N21	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	2F_N22	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	2F_N23	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	2F_N24	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	2F_N25	RCHE Dormitory			70	65	N/A	N/A	65	Yes
	2F_N26	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	2F_N27	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	2F_N28	RCHE Dormitory			70	64	N/A	N/A	64	Yes
	2F_N29	RCHE Dormitory			70	66	N/A	N/A	66	Yes

Results Summary	
Total No. of NAPs	68
Total No. of NAPs with exceedance	0
Compliance Rate	100%

APPENDIX 3.3
FIXED NOISE SITE SURVEY RECORD

Title: Inventory of Major Fixed Noise Sources

Source Location	Source Description	Source ID	Avg. Measured SPL, dB(A)	Measurement Dist. from Source (d), m	Distance Correction, dB(A)	SWL adopted in Fixed Noise Assessment, dB(A)	Remarks
祥發五金貿易有限公司	Open Storage	S01	65.8	15	31.5	97.3	
Hung Kee Metal Recycling Int'l Ltd.	Open Storage	S02	-	-	-	97.3	No operation was observed during site survey. SWL reference to S01
Dorfield Ltd.	Open Storage	S03	68.9	7	24.9	93.8	

Site Survey Record (conducted 23 July 2025 14:00 – 17:00)

Photo 1: 祥發五金貿易有限公司 (S01)

Photo 2: Hung Kee Metal Recycling Int'l Ltd. (S02)

Photo 3: Dorfield Ltd. (S03)

APPENDIX 3.4
DETAILED CALCULATION FOR FIXED NOISE IMPACT ASSESSMENT

Project:	Proposed Residential Care Home for the Elderly (RCHE) in Nam Sang Wai, Yuen Long
Title:	Assessment for Noise from Fixed Sources
Subtitle:	Calculation of SPL at Assessment Points
NSR ID:	2F_N01
NSR x coord:	823476.7
NSR y coord:	836538.3
NSR floor (/F)	2
NSR height (mPD)	17.2
ASR	B

Noise Source ID	Description	Activities/Equipment	Operation		SWL, dB(A)		Horizontal Distance from NSR, m	Correction, dB(A)			Day-time Corrected Noise Level, Leq dB(A)	Night-time Corrected Noise Level, Leq dB(A)	Remark
			Daytime	Night-time	Daytime	Night-time		Distance	Barrier	Façade			
S01	祥發五金貿易有限公司	Lorry Crane	Y	Y	97.3	97.3	172	-53	0	3	48	48	Ngiht time operation is assumed as worst case scenario
S02	Hung Kee Metal Recycling Int'l Ltd.	Lorry Crane	Y	Y	97.3	97.3	200	-54	0	3	46	46	
S03	Dorfield Ltd.	Fork Lift	Y	Y	93.8	93.8	234	-55	0	3	41	41	
									Total SPL		51	51	
									Criteria ANL		65	55	
									Exceedance		-	-	

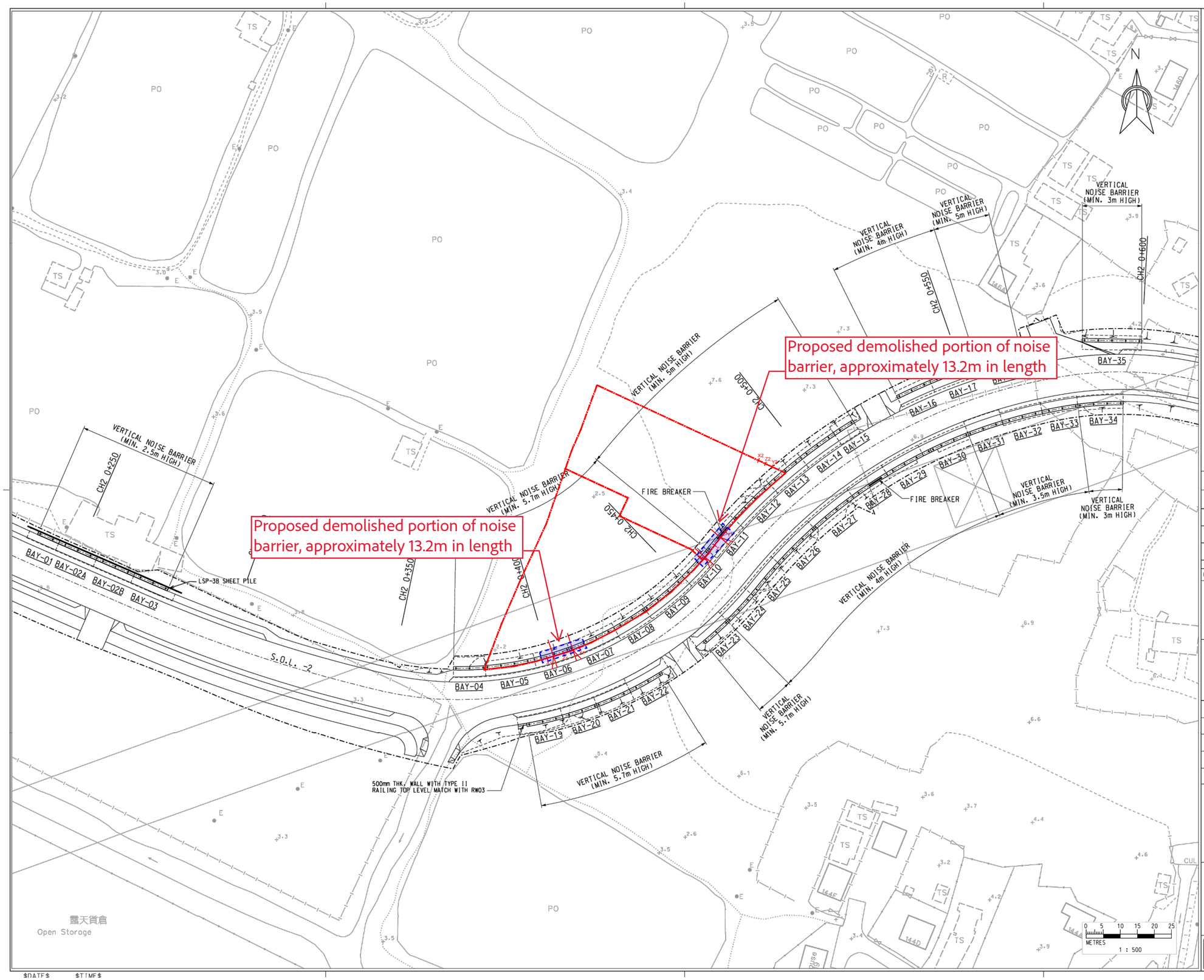
APPENDIX 3.5
MODIFICATION PLAN OF EXISTING NOISE BARRIER

12. Please provide a plan showing the pedestrian routing to the nearby franchised bus stop (both Yuen Long and Sheung Shui bound). Please specify the corresponding walking distance as well;	Noted. Please refer to Figure 2.7 in the revised TIA for the pedestrian route to the nearby franchised bus stops.
13. Para. 4.8: traffic trips specified here does not tally with the number in Table 4.4.;	Noted. Please refer to section 4.8 in revised TIA
14. Appendix 2: please specify the vehicular dimension (i.e. length and width) and driving speed adopted in the swept path analysis. Please adopt the largest possible vehicle that would enter the subject site in the swept path analysis;	Noted. Please refer to the Appendix 2 in the revised TIA.
15. Please provide a plan to demonstrate sufficient sightline could be maintained at the proposed site access;	The measured length of visibility splay for the motorists leaving the Proposed RCHD is 60m to the left and 60m to the right, which is illustrated in Figure 3.3 in the revised TIA.
16. There are noise barriers positioned at the proposed site access. Please provide details on the site access arrangement;	Portion of the existing noise barriers and related street furniture (planter) will be demolished for the proposed site access. Please refer to Appendix 3 for the proposed alterations.
17. From the planning statement, noted there is a separate planning application by the same applicant at the adjoining site for an RCHE. Please explore the feasibility of having a shared site access for the RCHD and RCHE site as well as the car ramp to the basement carpark; and	Please note that the proposed RCHD and RCHE are structurally independent and self-contained. Site access and car ramp to the basement carpark will not be shared.
18. Noted only two loading/ unloading spaces are provided in the subject site and given the loading/unloading activities for persons with disabilities would take extra time, please critically review the site layout to ensure the loading/unloading activities would not block the site entrance or causing queuing back problem.	Based on survey of RCHDs with similar characteristics, it is expected there are no more than 2 goods deliveries a day and these vehicles stay for less than 20 minutes. If required by Transport Department, the Applicant is willing to arrange for goods delivery to be conducted during the non-peak hours and for these deliveries not to be conducted concurrently.
Email dated 4th July 2025 refers: **Comments of the Chief Highway Engineer/New Territories West, Highways Department:**	
1. The applicant should ensure the run-in/out at Kam Pok Road East is constructed in accordance with the latest version of HyD Standard Drawings no. H1113 and H1114, or H5133, H5134 and H5135, whichever set if appropriate to match with the existing adjacent pavement;	Noted.
2. It is noted that there are existing noise barriers under HyD's maintenance purview at the south-east boundary of the site, adjoining Kam Pok Road East. Please advise if there are any modification or alteration of the noise barriers among other road features (e.g. the existing footpath/ carriageway adjoining the site) be required arising from the proposed development.	Please refer to Appendix 3 for the Modification Plans of Noise Barrier and Street Furniture.

Appendix 3

Modification Plans of

Noise Barrier and Street Furniture



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN mPD (METRE ABOVE HONG KONG PRINCIPAL DATUM).

LEGEND :

- SITE BOUNDARY
- NOISE BARRIER
- FIRE BREAKER
- LSP-3B SHEET PILE

Rev.	Description of Revision	Date	Ckd.
Z	AS BUILT	OCT 13	SIGNED
E	SHEET PILE ADDED	DEC 12	SIGNED
D	GENERAL REVISION	JUN 12	SIGNED
C	GENERAL REVISION	JAN 12	SIGNED
B	GENERAL REVISION	JAN 12	SIGNED
A	GENERAL REVISION	NOV 11	JM

Client

路政署（工程部）
HIGHWAYS DEPARTMENT
WORKS DIVISION

Consultants

MANNINGS (Asia) Consultants Limited

Scale in A1 1 : 500		Date DEC 2010
Designed FT	Drawn TWN	Checked JM
Design Team Leader SNG		Date DEC 2010
Approved KTC		Date DEC 2010

Project

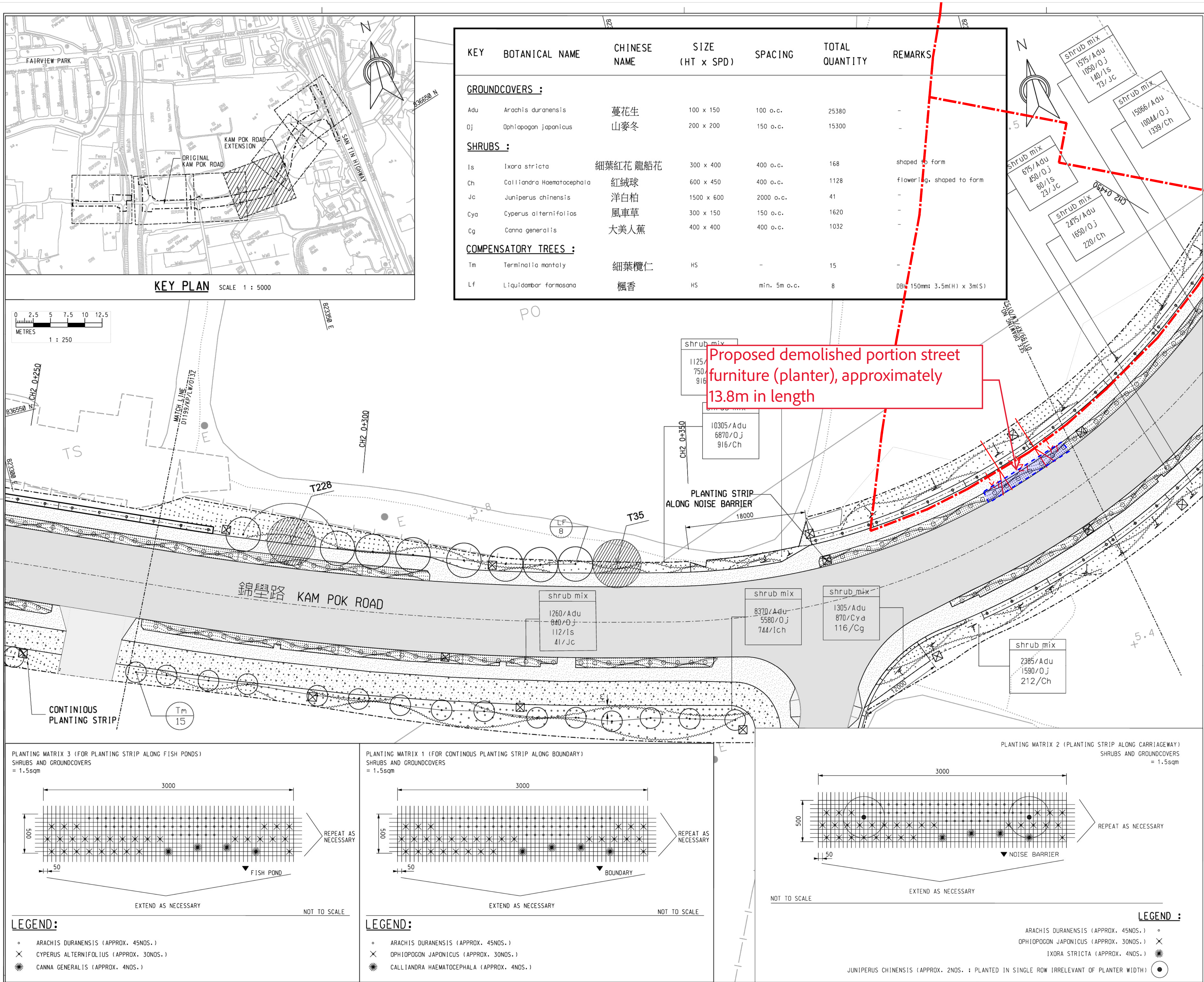
Contract No. HY/2010/09
Improvement and Extension of Kam Pok Road

Title

NOISE BARRIER LAYOUT PLAN

Drawing No.	Stage	Rev.
D1199/KP/NB/011		Z

$DATE$ $TIME$ $FILE$



KEY	BOTANICAL NAME	CHINESE NAME	SIZE (HT x SPD)	SPACING	TOTAL QUANTITY	REMARKS
GROUNDCOVERS :						
Adu	Arachis duranensis	蔓花生	100 x 150	100 o.c.	25380	-
Oj	Ophiopogon japonicus	山麥冬	200 x 200	150 o.c.	15300	-
SHRUBS :						
Is	Ixora stricta	細葉紅花 龍船花	300 x 400	400 o.c.	168	shaped to form
Ch	Calliandra Haematocephala	紅絨球	600 x 450	400 o.c.	1128	flowering, shaped to form
Jc	Juniperus chinensis	洋白柏	1500 x 600	2000 o.c.	41	-
Cya	Cyperus alternifolios	風車草	300 x 150	150 o.c.	1620	-
Cg	Canna generalis	大美人蕉	400 x 400	400 o.c.	1032	-
COMPENSATORY TREES :						
Tm	Terminalia mantaly	細葉欖仁	HS	-	15	-
Lf	Liquidambar formosana	楓香	HS	min. 5m o.c.	8	DBH 150mm; 3.5m(H) x 3m(S)

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN mPD (METRE ABOVE HONG KONG PRINCIPAL DATUM).
3. ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION FOR LANDSCAPE AND ALL RELEVANT DRAWINGS AND SPECIFICATIONS.
4. ALL PLANTS TO BE TRUE TO SPECIES; PLANTS TO BE HEALTHY AND WITH THE HABIT AND SIZE OF THE PLANT SPECIFIED. PLANTS TO BE FREE FROM PESTS, DISEASE, PARASITES, DISCOLORATION AND DAMAGE AND SHALL HAVE A VIGOROUS FIBROUS ROOT SYSTEM WITH WELL DEVELOPED SHAPE FOR THE SPECIES AS SPECIFIED.
5. ALL PLANTS AND TREES SHALL BE PLANTED ON GRADE AND OPEN-BOTTOM PLANTERS. TREE LOCATIONS SHALL BE REFERRED TO RELEVANT APPROVED TREE REMOVAL APPLICATION.
6. SOIL LEVEL SHALL BE LOWERED BY 50MM FROM THE FINISHED LEVEL AND SLIGHTLY MOUNDED TO CENTRE.
7. SOIL MIX TO BE BACKFILLED TO A DEPTH OF 600MM WHERE SHRUB AND GROUNDCOVER PLANTINGS SHALL BE LOCATED AND 1200MM WHERE TREES SHALL BE LOCATED.
8. ORIGINAL SUB-SOIL SHALL BE BROKEN UP TO FACILITATE NATURAL DRAINAGE.

LEGEND :

- SITE BOUNDARY
- C/W CARRIAGEWAY
- F/P FOOTPATH
- C/T CYCLE TRACK
- RUN-IN
- VERTICAL NOISE BARRIER
- RETAINING WALL
- PEDESTRIAN CROSSING
- PLANTING
- TRANSPLANTED TREES
- COMPENSATORY TREES
- WATER POINT (@ 40M INTERVAL)

Rev.	Description of Revision	Date	Ckd.
Z	AS BUILT	APR 15	SIGNED
C	GENERAL REVISION	AUG 13	SIGNED
B	GENERAL REVISION	JUL 13	SIGNED
A	GENERAL REVISION	JAN 13	SIGNED

Client: 路政署 (工程部) HIGHWAYS DEPARTMENT WORKS DIVISION

Consultants: MANNINGS (Asia) Consultants Limited

Scale in A1: 1 : 250 | Date: FEB 2011
Designed: GK | Drawn: SAN | Checked: JM
Design Team Leader: SNG | Date: FEB 2011
Approved: KTC | Date: FEB 2011

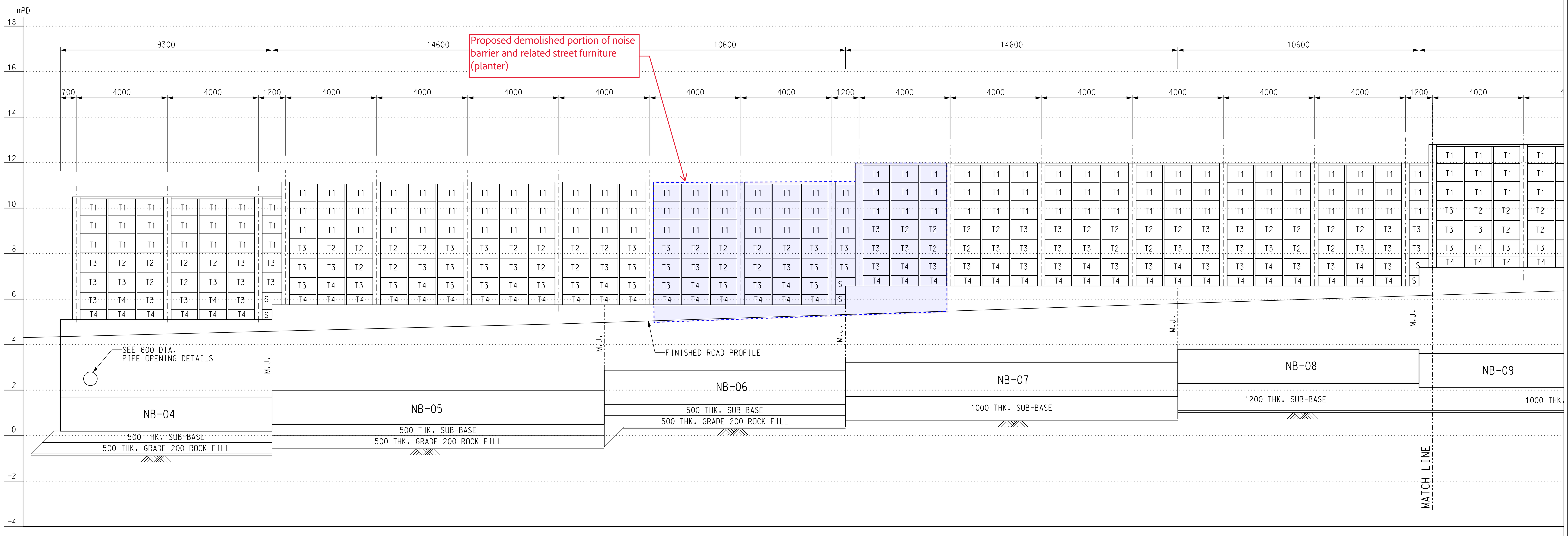
Project: Contract No. HY/2010/09 Improvement and Extension of Kam Pok Road

Title: *LANDSCAPE LAYOUT PLAN*

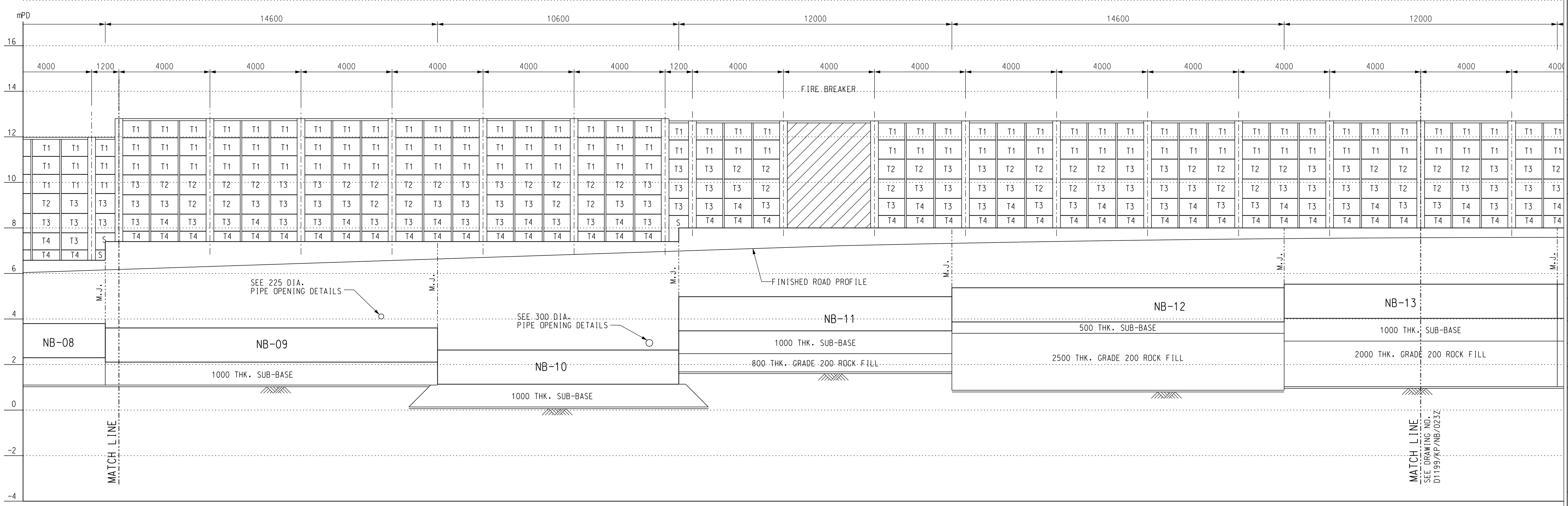
(SHEET 4 OF 6)

Drawing No.: D1199/KP/LW/014 | Stage | Rev.: Z

$DATE$ $TIME$ $FILE$



ELEVATION FROM NB-04 TO NB-15



ELEVATION FROM NB-04 TO NB-15

0 1 2 3 4 5
METRES
1 : 100

NOTES :

1. FOR NOTES & LEGEND REFER TO DRAWING NO. D1199/KP/NB/021Z.
2. FOR ALL PIPE OPENING DETAILS REFER TO DRAWING NO. D1199/KP/NB/018Z.
3. ALL PIPES ARE SHOWN FOR INDICATIVE ONLY.

Rev.	Description of Revision	Date	Ckd.
Z	AS BUILT	OCT 13	SIGNED

Client

路政署 （工程部）
HIGHWAYS DEPARTMENT
WORKS DIVISION

Consultants

MANNINGS (Asia) Consultants Limited

Scale in A1: 1 : 100	Date: DEC 2010	
Designed: GK	Drawn: TWN	Checked: JM
Design Team Leader: SNG		Date: DEC 2010
Approved: KTC		Date: DEC 2010

Project

Contract No. HY/2010/09
Improvement and Extension of Kam Pok Road

Title

NOISE BARRIER ELEVATIONS

(SHEET 2 OF 4)

Drawing No.	Stage	Rev.
D1199/KP/NB/022		Z

$DATE$ $TIME$ $FILE$

APPENDIX 6.1
ENQUIRIES TO GOVERNMENTAL AUTHORITY

本署檔案
OUR REF :
來函檔案
YOUR REF : W25185/RCHE-0002
電　　話
TEL NO : 3162 8418
圖文傳真
FAX NO : 3162 8584
網　　址
HOMEPAGE : http://www.epd.gov.hk/

Environmental Protection Department
Environmental Compliance Division
Regional Office (North)
10/F., Shatin Government Offices,
1 Sheung Wo Che Road,
Sha Tin, New Territories,
Hong Kong.

環境保護署
環保法規管理科
區域辦事處 (北)
香港新界沙田
上禾輋路一號
沙田政府合署 10 樓

By email only ([redacted])

3 July 2025

BeeXergy Consulting Limited
[redacted]
(Attn: Mr. Leo YU)

Dear Mr. YU,

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

RE: Request for Information of Registered Chemical Waste Producer Records and Historical Records of Chemical Spillage / Leakage

Regarding your enquiries in the letter under reference dated 30 June 2025, this Regional Office has no record of spillage or leakage of chemicals within the site boundary in the past ten years.

Concerning the records of registered chemical waste producers, a register of chemical waste producers is available for inspection in the Territorial Control Office of the department. If you would like to inspect, please contact Mr. Tim H. T. CHAN at 2835 1017 for making an appointment to view the records.

Should you have any query on the matter, please contact the undersigned at 3162 8418.

Yours sincerely,

(Ken NG)
For Director of Environmental Protection

Outlook

Re: Request for Information of Registered Dangerous Goods Records and Historical Records of Chemical Spillage / Leakage

From ado_lea_cs@hkfsd.gov.hk <ado_lea_cs@hkfsd.gov.hk>
Date Thu 7/24/2025 12:12 PM
To Leo Yu <[redacted]>
Cc OE8 CS/FSD <oe_cs_8@hkfsd.gov.hk>

Our reference: (19) in FSD GR 6-5/4 R Pt. 59
Your reference: W25185/RCHE-0001, W25185/RCHD-0001

Dear Mr. YU,

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE) and Residential Care Home for Persons with Disabilities (RCHD)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long
Request for Information of Dangerous Goods & Incident Records

I refer to your email of 27.6.2025 regarding the captioned request and reply below in response to your questions:-

Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

If you have further questions, please feel free to contact the undersigned.

Best regards,

TSANG Chun-hei Jason
Assistant Divisional Officer (Legal Affairs) (Acting)
Corporate Services Division
Fire Services Department

Tel.: 2733 7896

Remark:
Lift incidents are excluded unless otherwise required.

From: Leo Yu <[redacted]>
Sent: Friday, July 4, 2025 16:01
To: ADO LEA CS/FSD
Cc: OE8 CS/FSD
Subject: Re: Fw: Request for Information of Registered Dangerous Goods Records and Historical Records of Chemical Spillage / Leakage

Dear Mr. Chow,

Thank you for the prompt response. Please find enclosed the appointment letters for your record as requested.

Best regards,
Leo Yu
BeeXergy Consulting Limited | [redacted]

On Fri, 4 Jul 2025 at 08:29, <ado_lea_cs@hkfsd.gov.hk> wrote:
Our reference: (19) in FSD GR 6-5/4 R Pt. 59
Your reference: W25185/RCHE-0001, W25185/RCHD-0001

Dear Mr. YU,

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE) and Residential Care Home for Persons with Disabilities (RCHD)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long
Request for Information of Dangerous Goods & Incident Records

I refer to your email on 27.6.2025 regarding the captioned subject.

Your case is being handled, and a reply will be furnished to you as soon as possible. Please be advised that due to time lapse, this Department can only provide the following information for your requested information:

(i) Dangerous Goods Licence Record: from the year of 1990 to present moment.

(ii) Incident Record: Past three years of fire and special services incidents. Lift incidents will be excluded unless otherwise required.

Please also submit the appointment letter from your client for record.

Should you have further questions, please feel free to contact the undersigned.

Best regards,

CHOW Yin-hei
Assistant Divisional Officer (Legal Affairs)
Corporate Services Division
Fire Services Department

Tel.: 2733 7896

From: "Leo Yu" <[redacted]>
To: hkfsdenq@hkfsd.gov.hk
Date: 27/06/2025 17:42
Subject: Request for Information of Registered Dangerous Goods Records and Historical Records of Chemical Spillage / Leakage

---

Dear Sir/Madam,

We are commissioned to conduct Environmental Assessment to support the Planning Application No. A/YL-NSW/348 and A/YL-NSW/349 at Kam Pok Road East.

We would like to request information for our assessment, please find enclosed the cover letter for your follow up. Thank you.

Please contact the undersigned if you have any queries.

Best regards,
Leo Yu

BeeXergy Consulting Limited | [redacted]

[attachment "RCHE-0001 Letter_FSD.pdf" deleted by yin_hei CHOW/FSD/HKSARG] [attachment "RCHD-0001 Letter_FSD.pdf" deleted by yin_hei CHOW/FSD/HKSARG]

APPENDIX 6.2
SITE WALKOVER CHECKLIST

Site Walkover Checklist (24 July 2025)

GENERAL SITE DETAILS

SITE OWNER/CLIENT	Right Top Limited
PROPERTY ADDRESS	Various lots in D.D. 104 and adjoining government land, Nam Sang Wai, Yuen Long

PERSON CONDUCTING THE QUESTIONNAIRE

NAME	Leo Yu
POSITION	Consultant (Beexergy Consulting Limited)

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME	Law Yau Hung
POSITION	Director
TELEPHONE	[redacted]

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled.

Obtain a flow schematic if possible.

Number of employees:	Full-time:	Not applicable
	Part-time:	Not applicable
	Temporary/Seasonal:	Not applicable
Maximum no. of people on site at any time:		Not applicable
Typical hours of operation:		Not applicable
Number of shifts:		Not applicable
Days per week:		Not applicable
Weeks per year:		Not applicable
Scheduled plant shut-down:		Not applicable

Detail the main sources of energy at the site:

Gas	~~Yes~~/No
Electricity	~~Yes~~/No
Coal	~~Yes~~/No
Oil	~~Yes~~/No
Other	~~Yes~~/No

SITE DESCRIPTION

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area: Approximately 1,845sqm

What area of the site is covered by buildings (%): 0

Please list all current and previous owners/occupiers if possible. Right Top Limited

Is a site plan available? If yes, please attach. ~~Yes~~/No

Are there any other parties on site as tenants or sub-tenants? ~~Yes~~/No

If yes, identify those parties: _____

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North: Residential development

South: Kam Pok Road East and temporary storage

East: Kam Pok Road East and temporary storage

West: Ponds (to be redevelop as residential development according to A/YL-NSW/314)

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).

The site is a flat terrain in general.

State the size and location of the nearest residential communities.

The proposed residential development at the north and west is around 3 to 5 storeys.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

Ponds is found at the west, to be redevelop as residential development according to A/YL-NSW/314.

Questionnaire with Existing/Previous Site Owner or Occupier

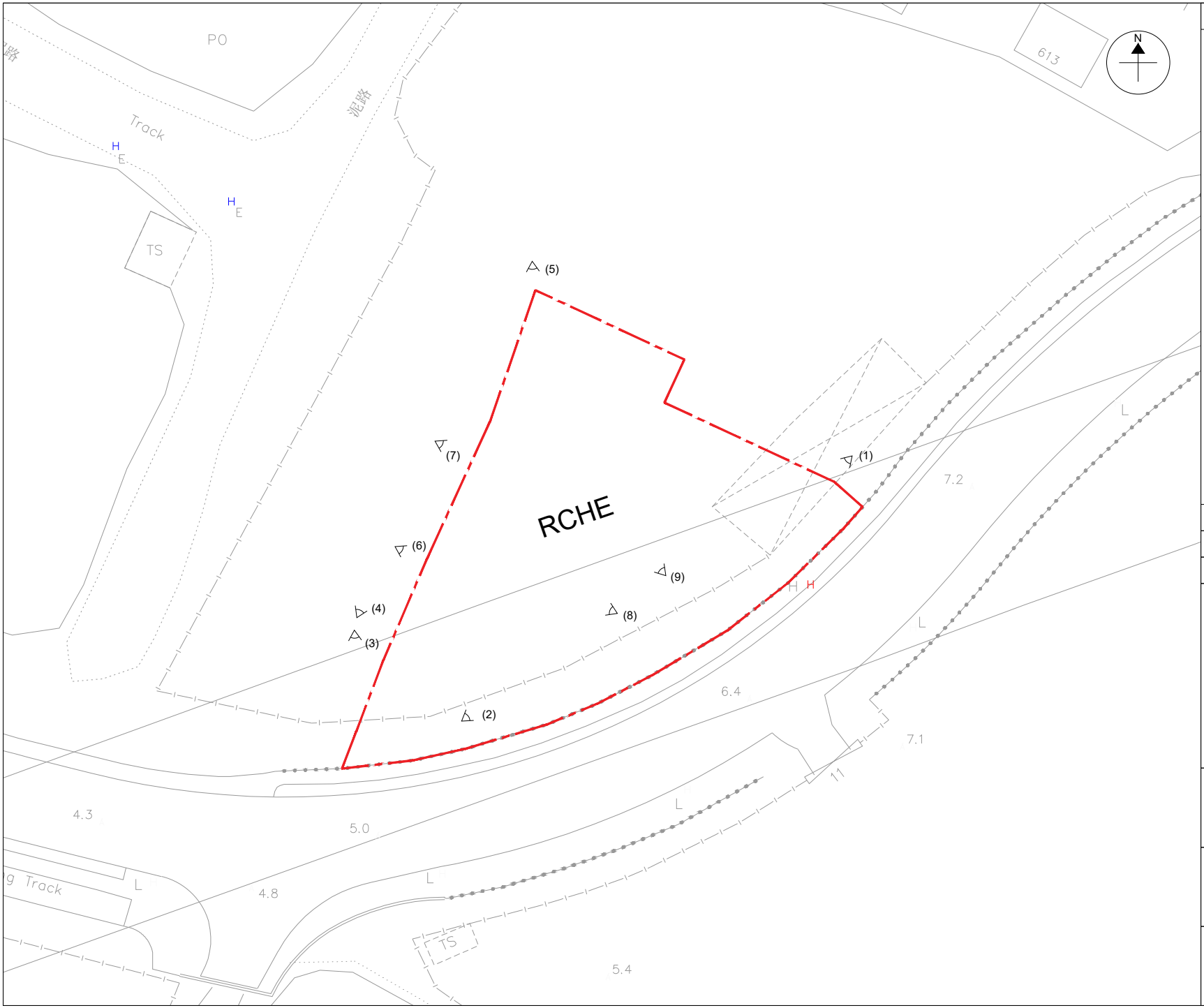
Ref.		Yes/No	Notes
1.	What are the main activities/operations at the above address?	No	
2.	How long have you been occupying the site?	No	
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy?)	No	
4.	Prior to your occupancy, who occupied the site?	No	
5.	What were the main activities/operations during their occupancy?	No	
6.	Have there been any major changes in operations carried out at the site in the last 10 years?	No	
7.	Have any polluting activities been carried out in the vicinity of the site in the past?	-	
8.	To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	-	
9.	Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	-	
10	Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	No	
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	No	
	• Where do you store these chemicals?	-	Not applicable
12.	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	-	Not applicable
13.	Has the facility produced a separate hazardous substance inventory?	No	
14.	Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	No	
15.	How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns,	No	

	vaults and cylinders)?		
16.	Do you have any underground storage tanks? (If yes, please provide details.)	No	
	▪ How many underground storage tanks do you have on site?	No	
	▪ What are the tanks constructed of?	No	
	▪ What are the contents of these tanks?	No	
	▪ Are the pipelines above or below ground?	No	
	▪ If the pipelines are below ground, has any leak and integrity testing been performed?	No	
	▪ Have there been any spills associated with these tanks?	No	
17.	Are there any disused underground storage tanks?	No	
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	-	Not applicable
19.	How are the wastes disposed of?	-	Not applicable
20.	Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	No	
21.	Have any spills occurred on site? (If yes, please provide details.)	No	
	• When did the spill occur?	-	
	• What were the substances spilled?	-	
	• What was the quantity of material spilled?	-	
	• Did you notify the relevant departments of the spill?	-	
	• What were the actions taken to clean up the spill?	-	
	• What were the areas affected?	-	
22.	Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	No	
23.	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	-	Not applicable
24.	Are there any known contaminations on site? (If yes, please provide details.)	-	
25.	Has the site ever been remediated? (If yes, please provide details.)	-	

Observations

1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A	No chemical storage area
2.	What are the conditions of the bund walls and floors?	N/A	No chemical storage area
3.	Are any surface water drains located near to drum storage and unloading areas?	No	
4.	Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	No	
5.	Is there a storage site for the wastes?	No	
6.	Is there an on-site landfill?	No	
7.	Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	
8.	Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	
9.	Are there any potential off-site sources of contamination?	No	
10.	Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	No	
11.	Are there any sumps, effluent pits, interceptors or lagoons on site?	No	
12.	Any noticeable odours during site walkover?	No	
13.	Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	No	

APPENDIX 6.3
SITE PHOTO



LEGEND:

Project Site

Viewpoint

	Prepared	Checked	Approved
Initial	Various	Various	HM
Date	20250926	20250926	20250926

Project Title

PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG

Figure Title

Viewpoint of photo record

Figure No.	**Rev.**
Appendix 6.3	0

BXG

BeeXergy Consulting Limited

Photo Record of Site Survey (24/07/2025)

Photo 1: Site perimeter at northeast of the site

Photo 2: Site perimeter at southeast of the site

Photo 3: Site perimeter at southwest of the site

Photo 4: Site perimeter at southwest of the site

Photo 5: Site perimeter at northwest of the site

Photo 6: General view of the site

Photo 7: The site was vacant and unpaved

Photo 8: No oil stain is observed on the ground

Photo 9: No oil stain is observed on the ground

Appendix 3

Revised Sewerage Impact Assessment (SIA)

PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG

SEWERAGE IMPACT ASSESSMENT

12 Jan 2026

Report No: RT25285-SIA-01D

Prepared By:

BeeXergy Consultin Limited (BXG)
Phone:
Address:

Email:

Project:	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, NAM SANG WAI, YUEN LONG SEWERAGE IMPACT ASSESSMENT
Report No.:	Ref: RT25285-SIA-01D

Revision	Issue Date	Description	Author	Checker	Approver
0	20/05/2025	Issued for Comment	LY	YS	HM
A	08/07/2025	Issued for Comment	LY	YS	HM
B	14/10/2025	Issued for Comment	VS	LY	HM
C	14/11/2025	Issued for Comment	VS	LY	HM
D	12/01/2026	Issued for Comment	VS	LY	HM

Prepared By:

Various

Checked by

Leo Yu

Consultant

Approved by:

Henry Mak

Director

Disclaimer:

- This report is prepared and submitted by Beexergy Consulting Limited with all reasonable skill to the best of our knowledge, incorporating our Terms and Conditions and taking account of the resources devoted to it by agreement with the client.
- We disclaim any responsibility to the client and others in respect of any matters outside the project scope.
- This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

1 INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1. The Project Proponent proposes to develop a 3-storey Residential Care Home for the Elderly (RCHE) in various lots in D.D. 104, Nam Sang Wai (hereafter called "the Proposed Development").

1.1.2. BeeXergy Consulting Limited was appointed by DeSPACE (International) Limited (the Town Planner) to conduct a Sewerage Impact Assessment (SIA) for the Proposed Development to support the application under Section 16 of the Town Planning Ordinance. The latest architectural drawings and technical information on the Project Site were largely provided by the Project Architect.

1.2 PROJECT LOCATION

1.2.1. The Project Site is approximately 1844m^2, currently bounded by abanoned fishponds to the north and west, Kam Pok Road East to the south. **Figure 1** shows the location of the Project Site and its surrounding area.

1.3 DESCRIPTION OF THE SUBJECT SITE AND PROPOSED DEVELOPMENT

1.3.1. The Project Site area is approximately 1,844m^2. The Proposed Development is an 3-storey building consisting of RCHE dormitory and communal area. The master layout plan provided by the Project Architect is enclosed in **Appendix A**. The tentative population intake year is 2030.

2 SEWERAGE IMPACT ASSESSMENT

2.1 SCOPE OF WORKS

2.1.1. The objective of this SIA is to assess whether the capacity of the sewerage networking is sufficient to cope with the peak sewage flow arising from the Proposed Development during its operation stage or not and to recommend appropriate mitigation measures to alleviate unacceptable sewerage impact, if any.

2.2 EXISTING SEWERAGE FACILITIES

2.2.1. The existing sewerage record from the Lands Department (LandsD) and Drainage Service Department (DSD) are obtained for this SIA and attached in **Figure 2**. There are no existing manholes identified in the sewerage plan. The public sewerage facility located closest to the Project Site is Nam Sang Wai Sewage Pumping Station which is located approximately 800m away from the boundary of the Project Site. Reference

was made to the approved planning application (A/YL-NSW/314), a set of existing 225mm public sewerage system (from feature no. MH540 to MH235) is identified along Kam Pok Road East, which is currently not in use, the relevant information is extracted in **Appendix C**.

2.3 OTHER PLANNED SEWERAGE FACILITIES

2.3.1. Reference was made to the approved planning application (A/YL-NSW/314), newly proposed sewers (P1 to P15) and upgrading works of the existing sewers identified along Kam Pok Road East (MH540 to MH235) were proposed to serve its own development and planned development sites in vicinity. The location of the proposed connection are shown in **Figure 3**.

2.3.2. It is noted that downstream sections of the communal gravity sewer, from manhole at the junction with Kam Pok Road connecting proposed manhole P3 to existing manhole FSH1001886, which connect along Pok Wai South Road to Nam Sang Wai Sewage Pumping Station (NSWSPS), have been proposed by several approved planning applications (No.: A/YL-NSW/314, Y/YL-NSW/7 and Y/YL-MP/10). The proposed alignment of this downstream section of the communal gravity sewer of different planning applications are shown in **Appendix D**.

2.4 PROPOSED SEWERAGE FACILITIES

2.4.1. New terminal manhole (namely S1) and manholes MH660, MH620 and MH580 will be constructed to collect the sewage generated from the Proposed Development and connect to manhole MH540 via a new 225mm diameter sewer pipe. The location of the proposed connection are shown in **Figure 3**. The cover level of proposed terminal manhole should be higher than that of the downstream public manhole(s). The proposed new terminal manhole and 225mm sewer pipe within site boundary will be implemented and maintained by the Project Proponent, other proposed manhole and sewer outside site boundary will become a public sewage system serving multiple users and will be handed over to government for future maintenance. The capacity check of the sewer will start from the proposed terminal manhole S1. The proposed development would not have population intake before the sewerage infrastructure of the project is functionally connected to the public sewerage system by other development mentioned in Section 2.3.

2.4.2. For other proposed sewers and upgrading works from MH540 to FSH100188, the Project Proponent will be responsible for the liaison and coordination with the other interfacing projects for the implementation of the required sewerage works in later stage. In case these planned sewers i.e. proposed sewers between MH235 to

FSH1001886 and upgraded sewers between MH540 to MH235 under planning application No. A/YL-NSW/314 are not available at the time of completion of the Proposed Development, the Project Proponent will, after liaison with DSD and the other future developments near the Proposed Site, construct the sewers in order to cater the sewage discharge during operation of the Proposed Development should a population intake be required. Otherwise, there will be no population intake until proposed sewerage system becomes available.

2.4.3. The party responsible for construction of sewers from manhole S1 to FSH1001886 is summarized in **Table 2.1**.

Table 2.1 Construction Responsibilities

Location	Manhole Section	Construction Responsibility
Within Development Boundary	S1 to MH660	The Developer
Outside Development Boundary	MH660 to MH540	The Developer
Outside Development Boundary	MH540 to FSH1001886	The Developer of other Developments

2.5 MAINTENANCE RESPONSIBILITY

2.5.1. All sewers and sewerage facilities within the proposed development will be constructed, operated, and maintained by the Proposed Development.

2.5.2. For the proposed gravity sewers are exclusively used by the Proposed Development, those sewers shall be maintained by the Proposed Development. For downstream sections of the communal gravity sewer that are proposed along Kam Pok East and Pok Wai South Rod to NSWSPS will become public sewers that serve multiple users, the sewers shall be handed over to the DSD for future maintenance.

2.5.3. The party responsible for maintenance of sewers from manhole S1 to FSH1001886 is summarized in **Table 2.2**.

Table 2.2 Maintenance Responsibilities

Location	Manhole Section	Maintenance Responsibility
Within Development Boundary	S1 to MH660	The Developer
Outside Development Boundary	S1 to MH660	The Developer
Outside Development Boundary	MH660 to FSH1001886	DSD

2.6 ASSESSMENT CRITERIA, METHODOLOGY, AND ASSUMPTIONS

2.6.1. The Unit Flow Factors and Global Peaking Factor are adopted from the figures in the Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version

1.0)[1] (GESF) issued by the Environmental Protection Department (EPD) in March 2005 to estimate the sewage flows generated from the Project Site.

2.6.2. The Unit Flow Factors and Catchment Inflow Factors as shown in **Table 2.3** below are adopted in the assessment and the surrounding catchments are shown in **Figure 3**.

Table 2.3 Unit Flow Factors and Catchment Inflow Factors Extracted from GESF

Parameter	Value	Justification
Population		
Residents in Proposed Development	208 people	208 beds
Employees in Proposed Development	90 people	Advised by Project Proponent
Unit Flow Factors		
Residents and Visitors in Proposed Development	0.19m^3/day	"Institutional and special class" based on EPD's GESF Table T-1.
Employees in Proposed Development	0.28m^3/day	J11 "Community, Social & Personal Services" based on EPD's GESF Table T-2.
Catchment Inflow Factor (P_{CIF})		
Discharge from the Project Site and all Catchments	1.0	Yuen Long Catchment based on EPD's GESF Table T-4.

2.6.3. With reference to Table T-5 of GESF, a global peaking factor of 8 and 6 (including stormwater allowance) are adopted according to the contributing population.

2.6.4. With reference to Table 5 in the Sewerage Manual (Part 1)[2] issued by the DSD in May 2013, slimed sewer of k_s of 0.6mm under "Poor" condition is assumed for both the sewers from the Subject Site and existing sewerage system in the worst-case scenario. The Colebrook-White Equation will be used to analyse the flow conditions. Equation (ii) for circular pipes flowing partially full is adopted to estimate the sewage flow for the Subject Site and following sewers.

2.7 RESULTS AND DISCUSSION

2.7.1. The estimated average flow rate and total peak flow of the Proposed Development are approximately 64.7m^3/day and 5.99L/s.

[1] http://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/water/guide_ref/files/gesf.pdf

[2] http://www.dsd.gov.hk/EN/Files/Technical_Manual/technical_manuals/Sewerage_Manual_1_Eurocodes.pdf

2.7.2. Sewage generated from the Proposed Development and surrounding catchment areas will be connected at the downstream of sewage network. The cumulative flow is not exceeded sewer capacity and no adverse sewerage impacts to the sewerage system are identified. Details of the sewage calculation are included in **Appendix B**.

3 CONCLUSION

3.2.1. A Social Welfare Facility (Residential Care Home for the Elderly) is proposed to develop at various lots in D.D. 104, Nam Sang Wai. This is the SIA to support the application under Section 16 of the Town Planning Ordinance. Based on the SIA results, it is found that the proposed sewerage system serving the area has sufficient capacity to cater for the sewage generation from the proposed development and the surrounding planned developments. Adverse sewerage impacts are not anticipated.

FIGURE 1
LOCATION OF THE PROJECT SITE AND ITS SURROUNDING AREA

LEGEND:

Site Boundary

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250530	20250530	20250530

Project Title

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DrawingTitle

PROPOSED DEVELOPMENT LOCATION

Drawing No.	Rev.
FIGURE 1	0

Scale:

A4 - 1:5500

BXG

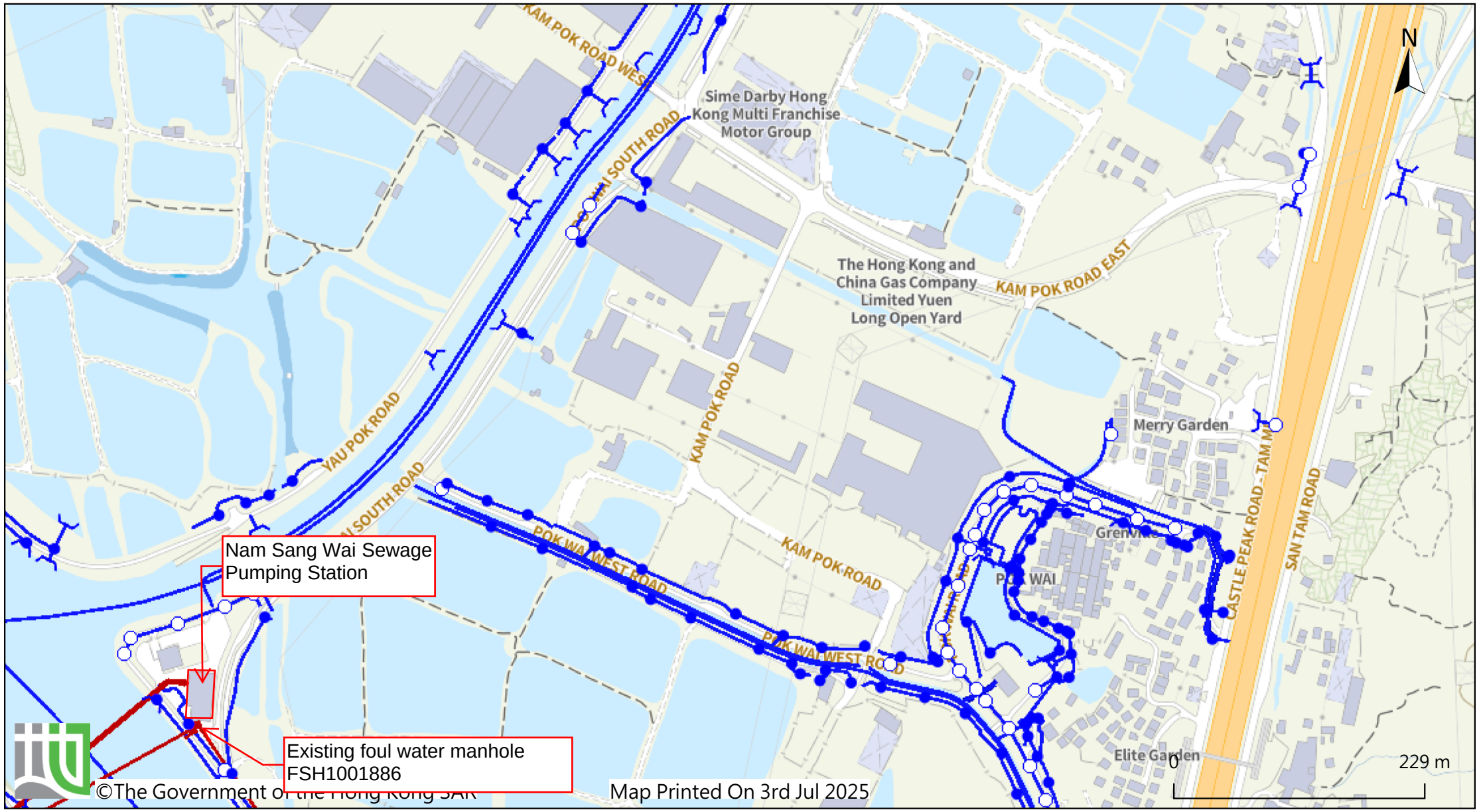
BeeXergy Consulting Limited

FIGURE 2

EXISTING SEWERAGE SYSTEM

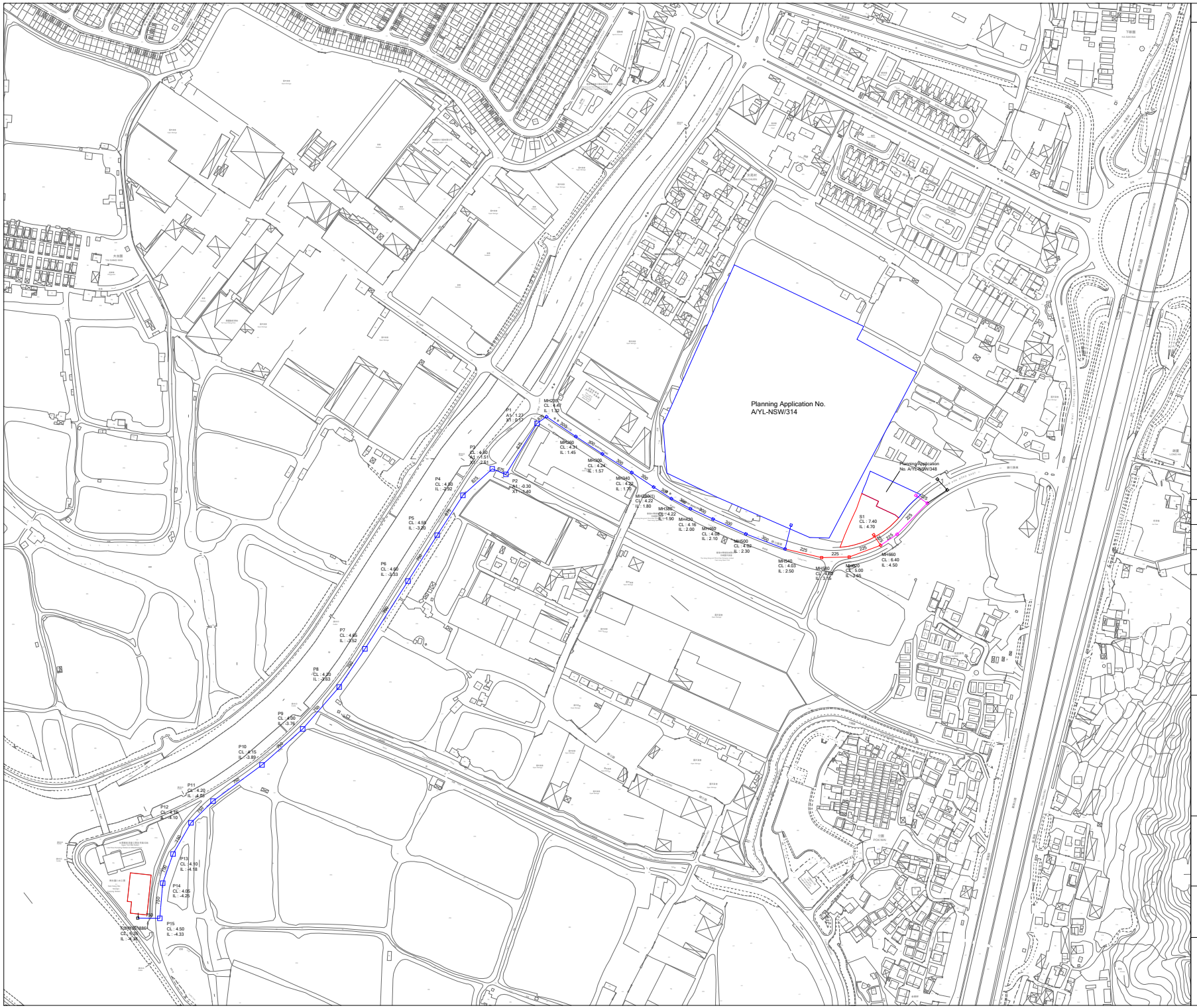
GEOINFO MAP
地理資訊地圖

Go to map: https://www.map.gov.hk/gm/geo:22.4667,114.0469?z=4514



Powered by GeoInfo Map: https://www.map.gov.hk

FIGURE 3
PROPOSED TERMINAL MANHOLE AND CONNECTION



LEGEND:

- Site Boundary
- Proposed Manhole
- Proposed Sewer
- Existing Manhole
- Existing Sewer
- Proposed Manhole (by App. No. A/YL-NSW/314)
- Proposed Sewer (by App. No. A/YL-NSW/314)
- Proposed Manhole (by App. No. A/YL-NSW/348)
- Proposed Sewer (by App. No. A/YL-NSW/348)

	Prepared	Checked	Approved
Initial	VS	LY	HM
Date	20260112	20260112	20260112

Project Title

Proposed Social Welfare Facilities (Residential Care Home for the Elderly(RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

Drawing Title

PROPOSED TERMINAL MANHOLE AND CONNECTION

Drawing No.	Rev.
FIGURE 3	0

Scale:

A4 - 1:5500

BXG

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APPENDIX A
MASTER LAYOUT PLAN

NOTES:

LEGEND:

THE SITE

EVA

GOVERNMENT LAND

OVERHEAD LINES

EXISTING NOISE BARRIER

PROPOSED RCHD
UNDER SEPARATE APPLICATION

KAM POK ROAD EAST

TOTAL FACADE LENGTH = 168.0
EFFECTIVE LENGTH COVERED BY
EVA = 51.73 = 30.8% >25%

X1 Z1 Y1

- EVA PLAN
KAM POK ROAD E RCHE 1:400 @ A3

REV	DATE	DESCRIPTION	BY	CHKD
A	22.9.2025	CONCEPT DESIGN	KC	PC
-	5.5.2025	CONCEPT DESIGN	KC	PC

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TOWN PLANNER

DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

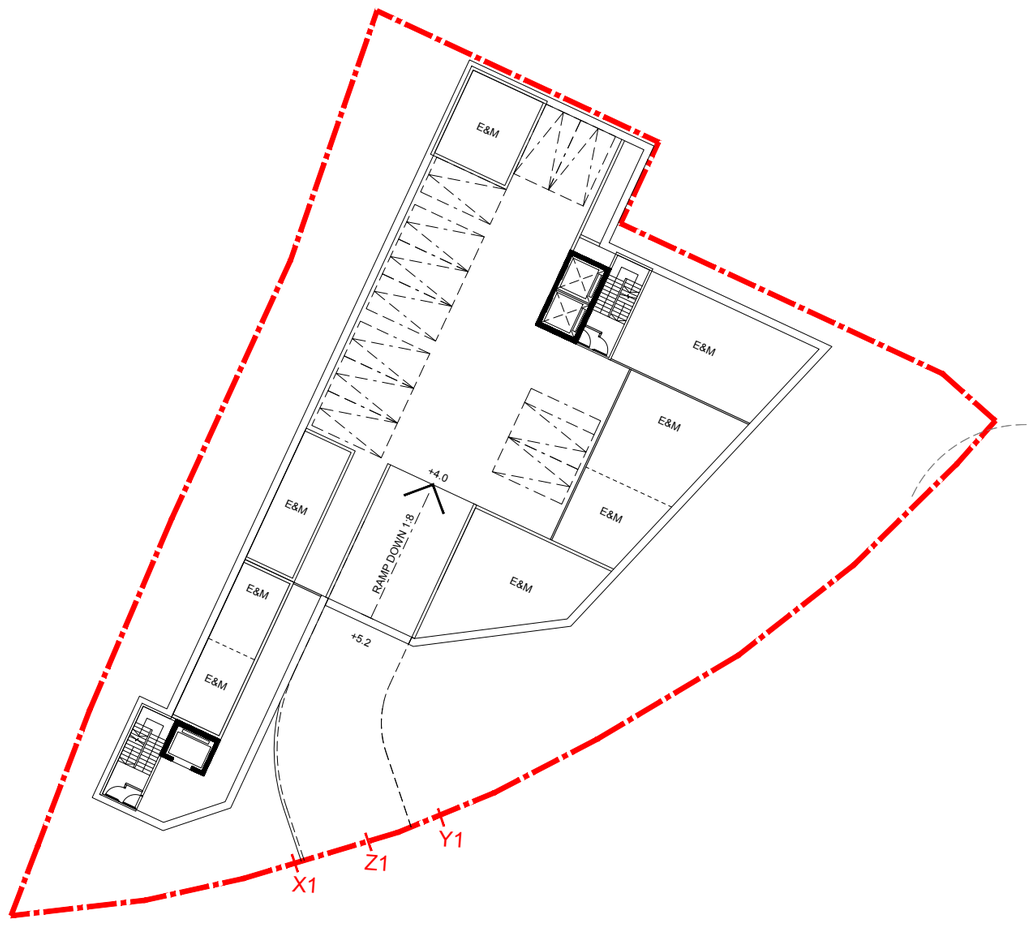
Syn Plus

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : EVA PLAN

SCALE : 1:400 @A3
PROJECT NO : 25001_KPR
Rev: A

Drawing No. : FIGURE 2
Date: MAY 2025



- BASEMENT FLOOR PLAN
KAM POK ROAD E RCHE 1:400 @ A3

NOTES:

REV	DATE	DESCRIPTION	BY	CHKD
A	9.7.2025	CONCEPT DESIGN	KC	PC
-	5.5.2025	CONCEPT DESIGN	KC	PC

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DRAWING : BASEMENT FLOOR PLAN

SCALE : 1: 400 @A3
PROJECT NO : 25001_KPR
Rev: —

Drawing No. : CP-B102
Date: MAY 2025

NOTES:

LEGEND:

PROPOSED PEDESTRIAN ACCESS

REV	DATE	DESCRIPTION	BY	CHKD
B	22.9.2025	CONCEPT DESIGN	KC	PC
A	9.7.2025	CONCEPT DESIGN	KC	PC
-	5.5.2025	CONCEPT DESIGN	KC	PC

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TOWN PLANNER

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ARCHITECT

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Syn Plus Design Limited

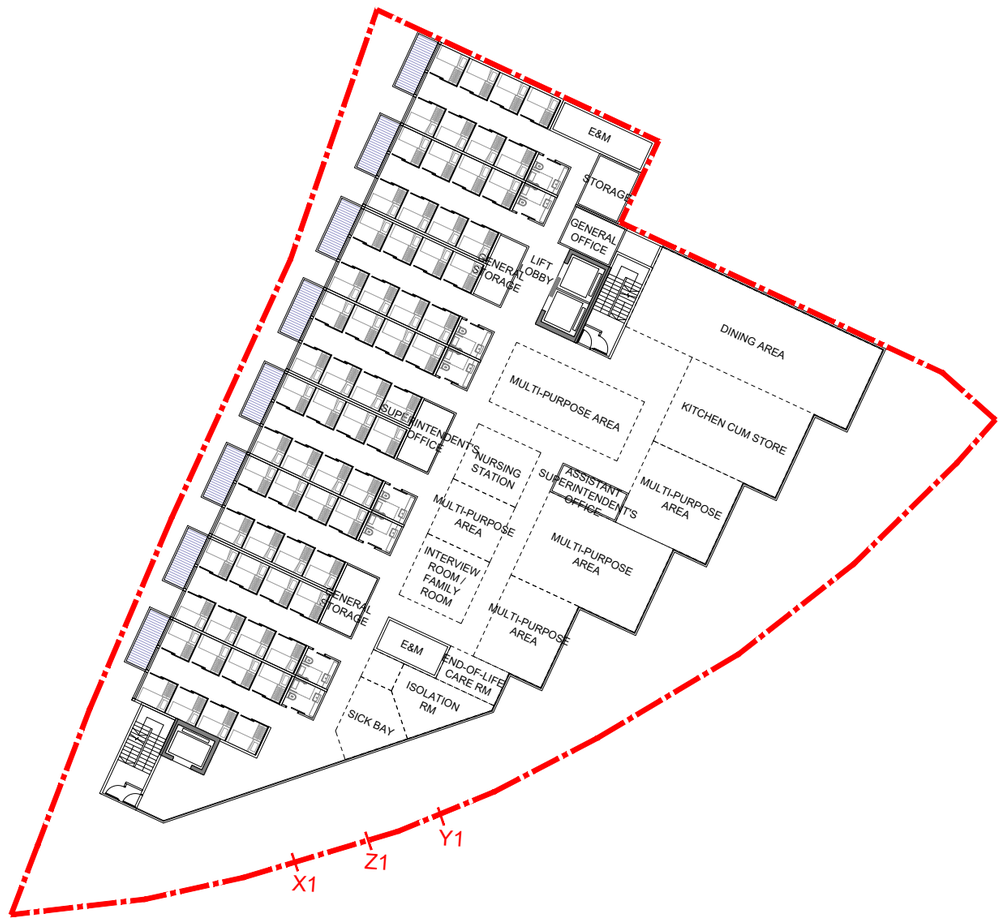
PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : GROUND FLOOR PLAN

SCALE : 1:400 @A3
PROJECT NO : 25001_KPR
Rev: B

Drawing No. : CP-B103
Date: MAY 2025

- GROUND FLOOR PLAN
KAM POK ROAD E RCHE 1:400 @ A3



- 1ST FLOOR PLAN
KAM POK ROAD E RCHE 1:400 @ A3

NOTES:

PROPOSED BALCONIES

REV	DATE	DESCRIPTION	BY	CHKD
A	9.7.2025	CONCEPT DESIGN	KC	PC
-	5.5.2025	CONCEPT DESIGN	KC	PC

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ARCHITECT

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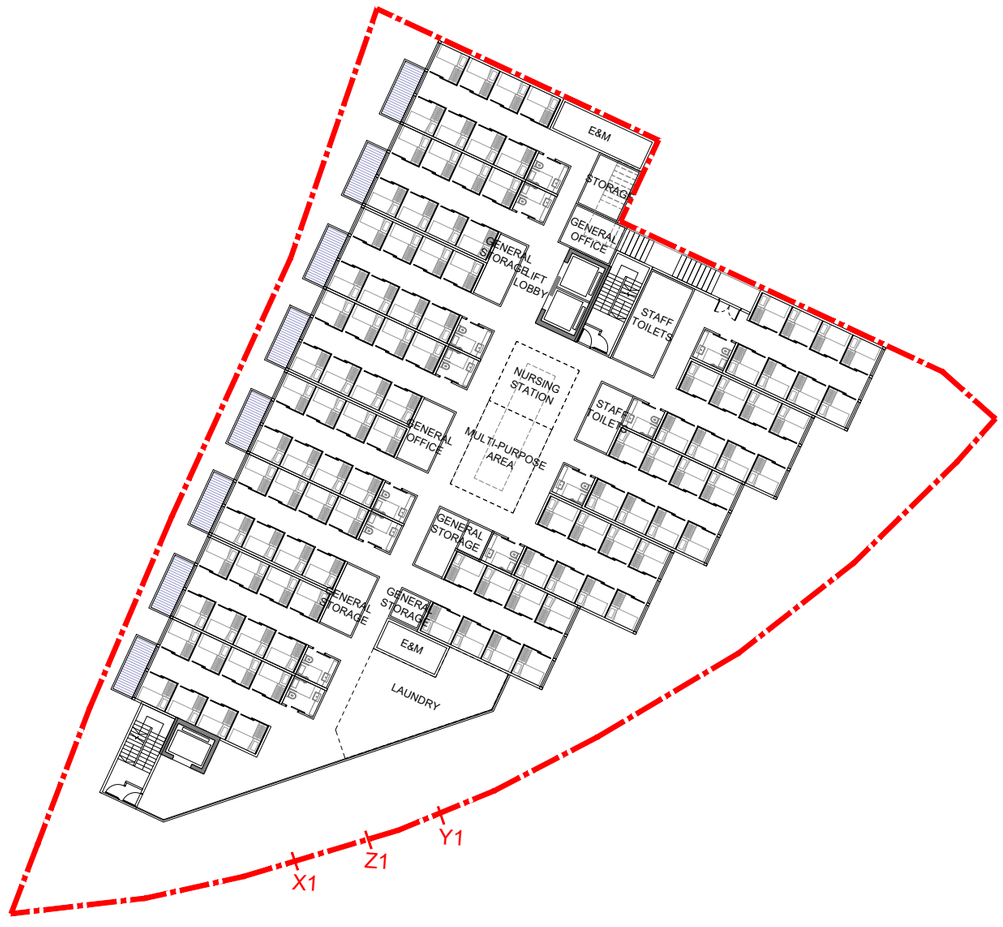
Syn Plus Design Limited

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : FIRST FLOOR PLAN

SCALE : 1:400 @A3
PROJECT NO : 25001_KPR
Rev: -

Drawing No. : CP-B104
Date: MAY 2025



- 2ND FLOOR PLAN
KAM POK ROAD E RCHE 1:400 @ A3

NOTES:

PROPOSED BALCONIES

REV	DATE	DESCRIPTION	BY	CHKD
A	9.7.2025	CONCEPT DESIGN	KC	PC
-	5.5.2025	CONCEPT DESIGN	KC	PC

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TOWN PLANNER

DeSPACE (International) Limited

DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

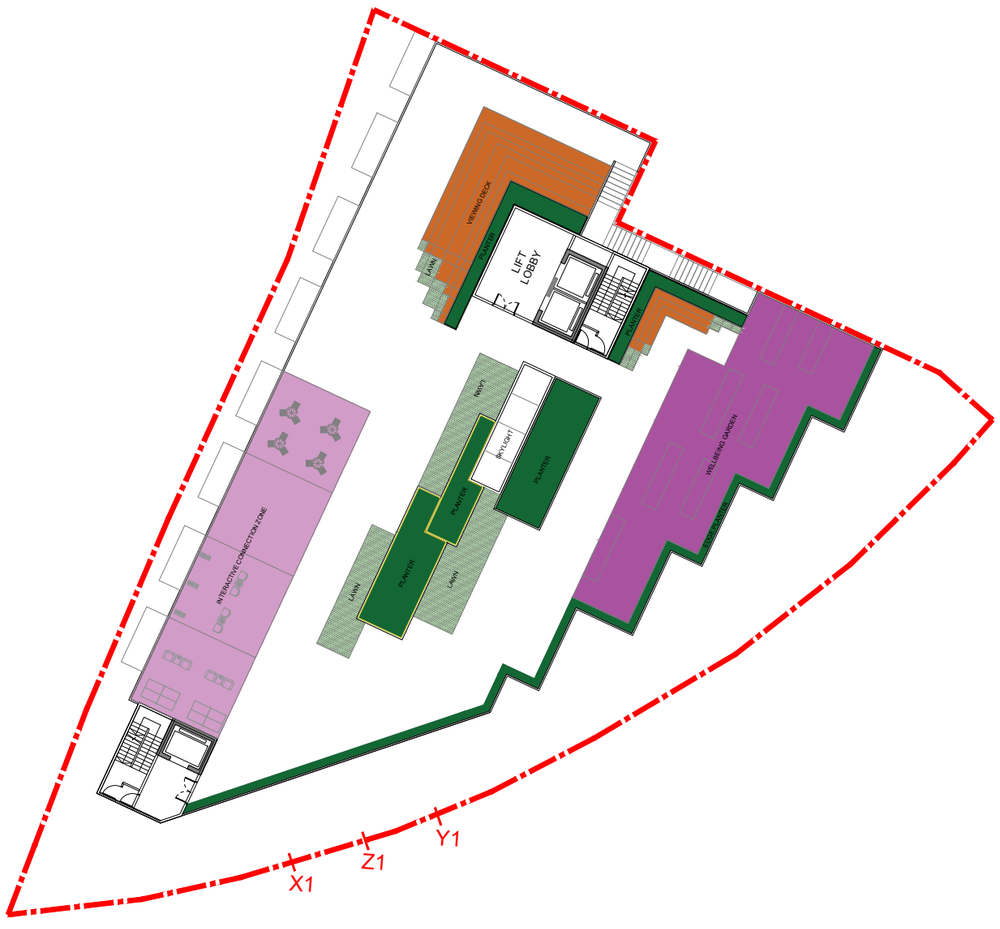
Syn Plus

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : SECOND FLOOR PLAN

SCALE : 1:400 @A3
PROJECT NO : 25001_KPR
Rev: -

Drawing No. :
CP-B105
Date: MAY 2025



- ROOF PLAN

KAM POK ROAD E RCHE 1:400 @ A3

NOTES:

PROPOSED PLANTERS

PROPOSED LAWN

PROPOSED SKYLIGHT

PROPOSED WELLBEING GARDEN

PROPOSED VIEWING DECK

PROPOSED INTERACTIVE CONNECTION ZONE

REV	DATE	DESCRIPTION	BY	CHKD
-	5.5.2025	CONCEPT DESIGN	KC	PC

Do not scale from drawings. All dimensions must be checked and verified on site before any works are undertaken. Any discrepancies must be reported in writing to Architect.

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Syn Plus Design Limited

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : ROOF PLAN

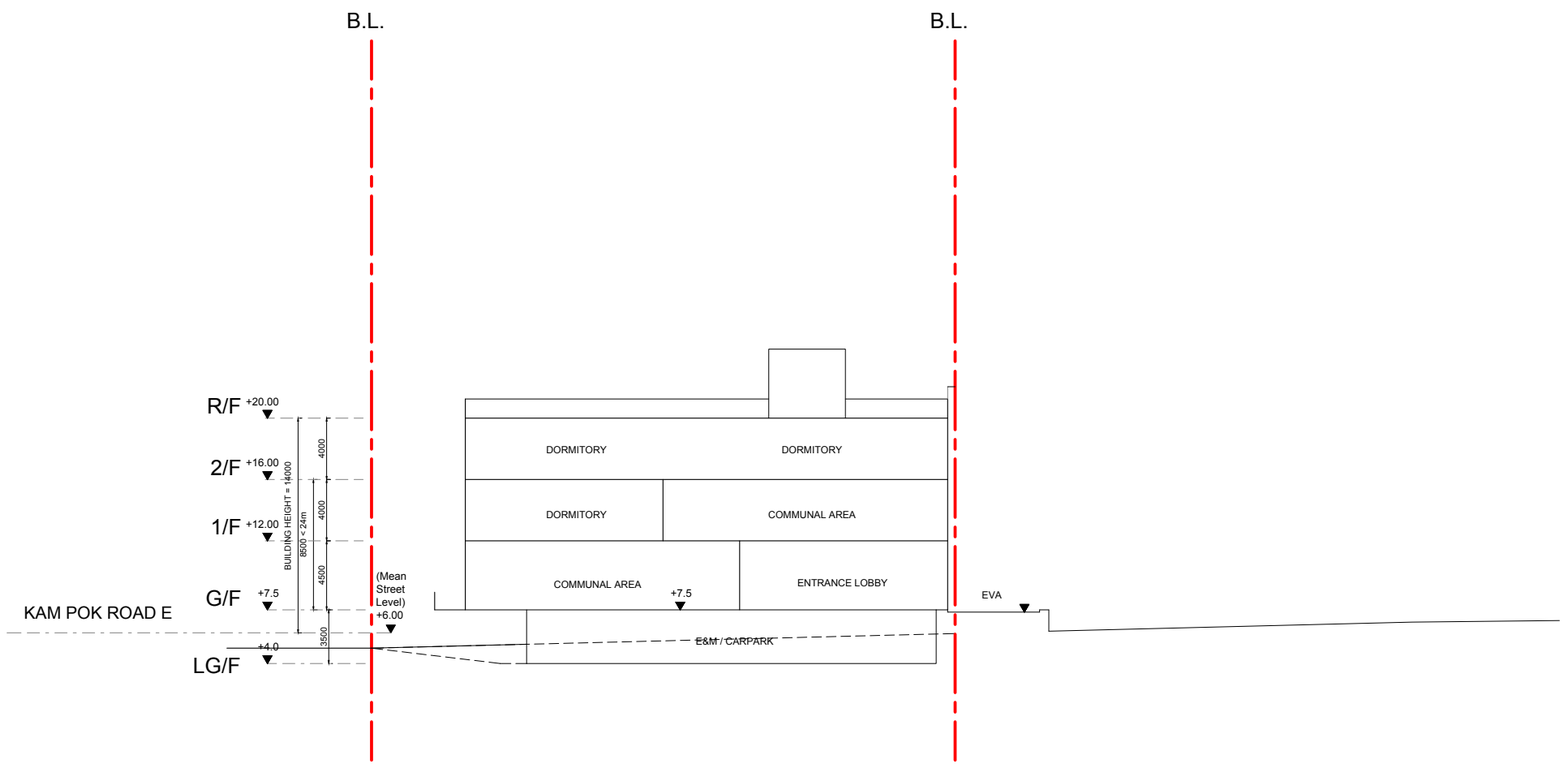
SCALE : 1:400 @A3

PROJECT NO : 25001_KPR

Rev: -

Drawing No. : CP-B106

Date: MAY 2025



- SCHEMATIC SECTION
KAM POK ROAD E RCHE 1:400 @ A3

NOTES:

REV	DATE	DESCRIPTION	BY	CHKD
-	5.5.2025	CONCEPT DESIGN	KC	PC

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ARCHITECT

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Syn Plus Design Limited

PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : SCHEMATIC SECTION

SCALE : 1:400 @A3
PROJECT NO : 25001_KPR
Rev: —

Drawing No. : CP-B201
Date: MAY 2025

APPENDIX B
SEWAGE CALCULATION AND HYDRAULIC CAPACITY CHECK

APPENDIX B - CALCULATION OF SEWAGE FLOW

Development	GFA (m^2)	No. of Flat	Occupancy Density [a], [b] (Number of Persons) (Workers per GFA in 100m^2)	Estimated Population	Unit Flow Factor (m^3/day)	Estimated Average Dry Weather Flow (m^3/day)	Catchment Inflow Factor	Estimated Average Dry Weather Flow X Catchment Inflow Factor (m^3/day)	Remarks
1) Proposed Development									
Residents in Proposed Development	3850	-	-	208	0.19	39.520	1.0	39.520	Estimated Population: The proposed development scheme will provide 208 bed spaces. Unit Flow Factor: 0.190m^3/day for 'Institutional and special class' based on EPD's GESF Table T-1
Employees in Proposed Development		-	-	90	0.28	25.200		25.200	Estimated Population: Number of staff advised by Project Proponent . Unit Flow Factor: 0.280m^3/day for 'Institutional and special class' based on EPD's GESF Table T-1
Total Avaerage Daily Dry Weather Flow of Proposed Development (m^3/day)								**64.720**	

Sewage Flow of Planned Development

Planning Application No.	ADWF (m3/day)	Contributing Populatoin [1]
A/YL-NSW/348	59.02	219
A/YL-NSW/314	125.3	464
Y/YL-MP/7	1001.1	3708
Y/YL-MP/8	984.3	3646
Y/YL-MP/10	1972.76	7307
Y/YL-MP/11	1039.06	3848
Y/YL-NSW/7	1565	5796

Section	Contributing Development	Total ADWF (m3/day)	Total Contributing Population	Peaking Factor	Peak Flow (L/s)
MH660 to MH540	Proposed Development A/YL-NSW/348	123.740	517	8	11.46
MH540 to P3	Proposed Development A/YL-NSW/348 A/YL-NSW/314	249.040	981	8	23.06
P3 to P9	Proposed Development A/YL-NSW/348 A/YL-NSW/314 Y/YL-MP/7 Y/YL-MP/8 Y/YL-MP/10 Y/YL-MP/11	5246.260	19489	4	242.88
P9 to FSH1001886	Proposed Development A/YL-NSW/348 A/YL-NSW/314 Y/YL-MP/7 Y/YL-MP/8 Y/YL-MP/10 Y/YL-MP/11 Y/YL-NSW/7	6811.260	25285	4	315.34

Note:

[1] Contributing population = Project calculated total average flow (ADWF in m3/day) / 0.27 (m3/person/day)

Appendix B - Hydraulic Capacity of the Proposed and Downstream Sewers

Manhole Reference	Manhole Reference	Pipe Dia.	Pipe Length	Upstream Invert Level	Downstream Invert Level	g (1)	k_s (1), (3)	s (1)	v (1)	V (1), (2)	A	Q (4)	Estimated Capacity	ADWF	Contributing Population	Peaking Factor	Peak Flow	Capacity	Compliance	Remarks
		mm	m	mPD	mPD	m/s^2	m		m^2/s	m/s	m^2	m^3/s	L/s	m^3/day			L/s	%		
S1	MH660	225	27.0	4.700	4.500	9.81	0.0006	0.0074	1.306E-06	1.1196	0.0398	0.0445	44.52	64.72	298	8	5.99	13.5%	Yes	
MH660	MH620	225	42.0	4.500	3.650	9.81	0.0006	0.0202	1.306E-06	1.8611	0.0398	0.0740	74.00	123.74	517	8	11.46	15.5%	Yes	
MH620	MH580	225	31.0	3.650	3.150	9.81	0.0006	0.0161	1.306E-06	1.6597	0.0398	0.0660	65.99	123.74	517	8	11.46	17.4%	Yes	
MH580	MH540	225	38.0	3.150	2.500	9.81	0.0006	0.0171	1.306E-06	1.7097	0.0398	0.0680	67.98	123.74	517	8	11.46	16.9%	Yes	
MH540	MH500	300	46.0	2.500	2.300	9.81	0.0006	0.0043	1.306E-06	1.0286	0.0707	0.0727	72.71	249.04	981	8	23.06	31.7%	Yes	
MH500	MH460	300	40.0	2.300	2.100	9.81	0.0006	0.0050	1.306E-06	1.1042	0.0707	0.0781	78.05	249.04	981	8	23.06	29.5%	Yes	
MH460	MH420	300	27.0	2.100	2.000	9.81	0.0006	0.0037	1.306E-06	0.9482	0.0707	0.0670	67.02	249.04	981	8	23.06	34.4%	Yes	
MH420	MH380	300	24.0	2.000	1.900	9.81	0.0006	0.0042	1.306E-06	1.0066	0.0707	0.0712	71.16	249.04	981	8	23.06	32.4%	Yes	
MH380	MH380(1)	300	23.0	1.900	1.800	9.81	0.0006	0.0043	1.306E-06	1.0286	0.0707	0.0727	72.71	249.04	981	8	23.06	31.7%	Yes	
MH380(1)	MH340	300	29.0	1.800	1.700	9.81	0.0006	0.0034	1.306E-06	0.9144	0.0707	0.0646	64.63	249.04	981	8	23.06	35.7%	Yes	
MH340	MH300	300	38.0	1.700	1.570	9.81	0.0006	0.0034	1.306E-06	0.9107	0.0707	0.0644	64.37	249.04	981	8	23.06	35.8%	Yes	
MH300	MH260	300	35.0	1.570	1.450	9.81	0.0006	0.0034	1.306E-06	0.9117	0.0707	0.0644	64.44	249.04	981	8	23.06	35.8%	Yes	
MH260	MH235	300	39.0	1.450	1.320	9.81	0.0006	0.0033	1.306E-06	0.8987	0.0707	0.0635	63.53	249.04	981	8	23.06	36.3%	Yes	
MH235	P1	675	13.0	1.320	1.270	9.81	0.0006	0.0038	1.306E-06	1.6166	0.3578	0.5785	1157.03	249.04	981	8	23.06	2.0%	Yes	Twin pipe
P1	P2	675	66.0	0.170	-0.300	9.81	0.0006	0.0071	1.306E-06	2.2057	0.3578	0.7893	1578.57	249.04	981	8	23.06	1.5%	Yes	Twin pipe
P2	P3	675	16.0	-1.400	-1.510	9.81	0.0006	0.0069	1.306E-06	2.1669	0.3578	0.7754	1550.84	249.04	981	8	23.06	1.5%	Yes	Twin pipe
P3	P4	675	43.0	-2.610	-2.920	9.81	0.0006	0.0072	1.306E-06	2.2194	0.3578	0.7942	1588.38	5246.26	19489	4	242.88	15.3%	Yes	Twin pipe
P4	P5	675	52.0	-2.920	-3.200	9.81	0.0006	0.0054	1.306E-06	1.9158	0.3578	0.6856	1371.14	5246.26	19489	4	242.88	17.7%	Yes	Twin pipe
P5	P6	750	60.0	-3.200	-3.330	9.81	0.0006	0.0022	1.306E-06	1.2920	0.4418	0.5708	1141.60	5246.26	19489	4	242.88	21.3%	Yes	Twin pipe
P6	P7	750	88.0	-3.330	-3.520	9.81	0.0006	0.0022	1.306E-06	1.2897	0.4418	0.5698	1139.58	5246.26	19489	4	242.88	21.3%	Yes	Twin pipe
P7	P8	750	50.0	-3.520	-3.630	9.81	0.0006	0.0022	1.306E-06	1.3020	0.4418	0.5752	1150.45	5246.26	19489	4	242.88	21.1%	Yes	Twin pipe
P8	P9	750	61.0	-3.630	-3.760	9.81	0.0006	0.0021	1.306E-06	1.2813	0.4418	0.5660	1132.09	5246.26	19489	4	242.88	21.5%	Yes	Twin pipe
P9	P10	750	59.0	-3.760	-3.890	9.81	0.0006	0.0022	1.306E-06	1.3031	0.4418	0.5757	1151.35	6811.26	25285	4	315.34	27.4%	Yes	Twin pipe
P10	P11	750	67.0	-3.890	-4.030	9.81	0.0006	0.0021	1.306E-06	1.2685	0.4418	0.5604	1120.85	6811.26	25285	4	315.34	28.1%	Yes	Twin pipe
P11	P12	750	34.0	-4.030	-4.100	9.81	0.0006	0.0021	1.306E-06	1.2591	0.4418	0.5562	1112.48	6811.26	25285	4	315.34	28.3%	Yes	Twin pipe
P12	P13	750	40.0	-4.100	-4.180	9.81	0.0006	0.0020	1.306E-06	1.2407	0.4418	0.5481	1096.27	6811.26	25285	4	315.34	28.8%	Yes	Twin pipe
P13	P14	750	34.0	-4.180	-4.250	9.81	0.0006	0.0021	1.306E-06	1.2591	0.4418	0.5562	1112.48	6811.26	25285	4	315.34	28.3%	Yes	Twin pipe
P14	P15	750	39.0	-4.250	-4.330	9.81	0.0006	0.0021	1.306E-06	1.2567	0.4418	0.5552	1110.41	6811.26	25285	4	315.34	28.4%	Yes	Twin pipe
P15	FSH1001886	750	24.0	-4.330	-4.380	9.81	0.0006	0.0021	1.306E-06	1.2666	0.4418	0.5596	1119.16	6811.26	25285	4	315.34	28.2%	Yes	Twin pipe

Note:

(1) g=gravitational acceleration; k_s=equivalent sand roughness; s=gradient; v=kinematic viscosity of water; V=mean velocity

(2) The mean velocity (V) is claculated by the Colebrook-White Equation for circular pipes:

$$V = -\sqrt{(8gDs)}\log\left(\frac{ks}{3.7D} + \frac{2.51v}{D\sqrt{(2gDs)}}\right)$$

where V = mean velocity (m/s)

g = gravitational acceration (m/s^2)

D = internal pipe diameter (m)

s = slope

ks = roughness coefficient(m)

v = kinematic viscosity of fluid (m^2/s)

(3) The value of k_s = 0.6mm is used for the calculation of existing pipe for conservative approach and 0.6mm for proposed new clayware pipe in poor condition based on DSD's "Sewerage Manual" Table 5: Recommended roughness values

(4) Peak flow (Q) is calculated by Q = V x A

APPENDIX C
EXISTING SEWERS IDENTIFIED UNDER APPROVED APPLICATION NO. A/YL-NSW/314

2. SEWERAGE IMPACT ASSESSMENT ("SIA")

2.1 Introduction

2.1.1 The Proposed Development is a comprehensive development scheme to include wetland restoration proposal. This section gives a brief discussion on the current environmental legislation and standards and assess the impacts arising from the proposed development. Recommendations of mitigation measures have been made if there is any adverse effect induced by the proposed development.

2.2 Existing and Planned Sewerage Infrastructure

2.2.1 The site currently falls within the Yuen Long / Kam Tin sewerage catchment and is classified as an unsewered area under the Yuen Long / Kam Tin Sewerage Master Plan (YLKT SMP). A set of existing 225mm public sewerage system (from feature no. MH540 to MH235) is identified along Kam Pok Road East, which is currently not in use and could serve the Project Site.

2.2.2 The existing Yuen Long Sewage Treatment Works (YLSTW) serves Yuen Long Town, Yuen Long Industrial Estate and Kam Tin areas with a design capacity of 70,000m^3/day (ADWF). It provides primary and sec... ...he Shan Pui River and then to Deep Bay.

Existing public sewers under Approved Planning Application No. A/YL-NSW/314

2.2.3 The public sewerage facility located c... ...ge Pumping Station (SPS), as shown in ...

2.3 Assessment Methodology and Assumptions

2.3.1 An analysis of the capacity of the sewage pipes and the SPS has been carried out to evaluate the adequacy of the proposed sewerage system. The design assumptions and basis are shown in **Table 2-1**.

Table 2-1 Design Assumption and Basis

Items	Values
Design Standard	DSD Sewerage Design Manual, Part 1 & 2
Flow Formula Used	Colebrook White Formula
Unit Flow Factor	EPD Guideline for Estimating Sewerage Flows for Sewerage Infrastructure Planning (GESF) 0.37 m^3/d/head (Domestic, Private R3) for residents 0.28 m^3/d/head (Commercial, J11) for clubhouse staff 1.58 m^3/d/head (Restaurant, J10) for restaurant

2.4 Estimate of Sewage Flow

2.4.1 The sewage flow to be generated from the projected residential population, as well as activities at the clubhouse and the associated facilities has been estimated following "EPD Guideline for Estimating Sewage Flows for Sewage Infrastructure Planning". Major contributions of sewage flow from the Proposed Development include projected 270 residents. The estimated sewage flow is shown in **Table 2-2**.

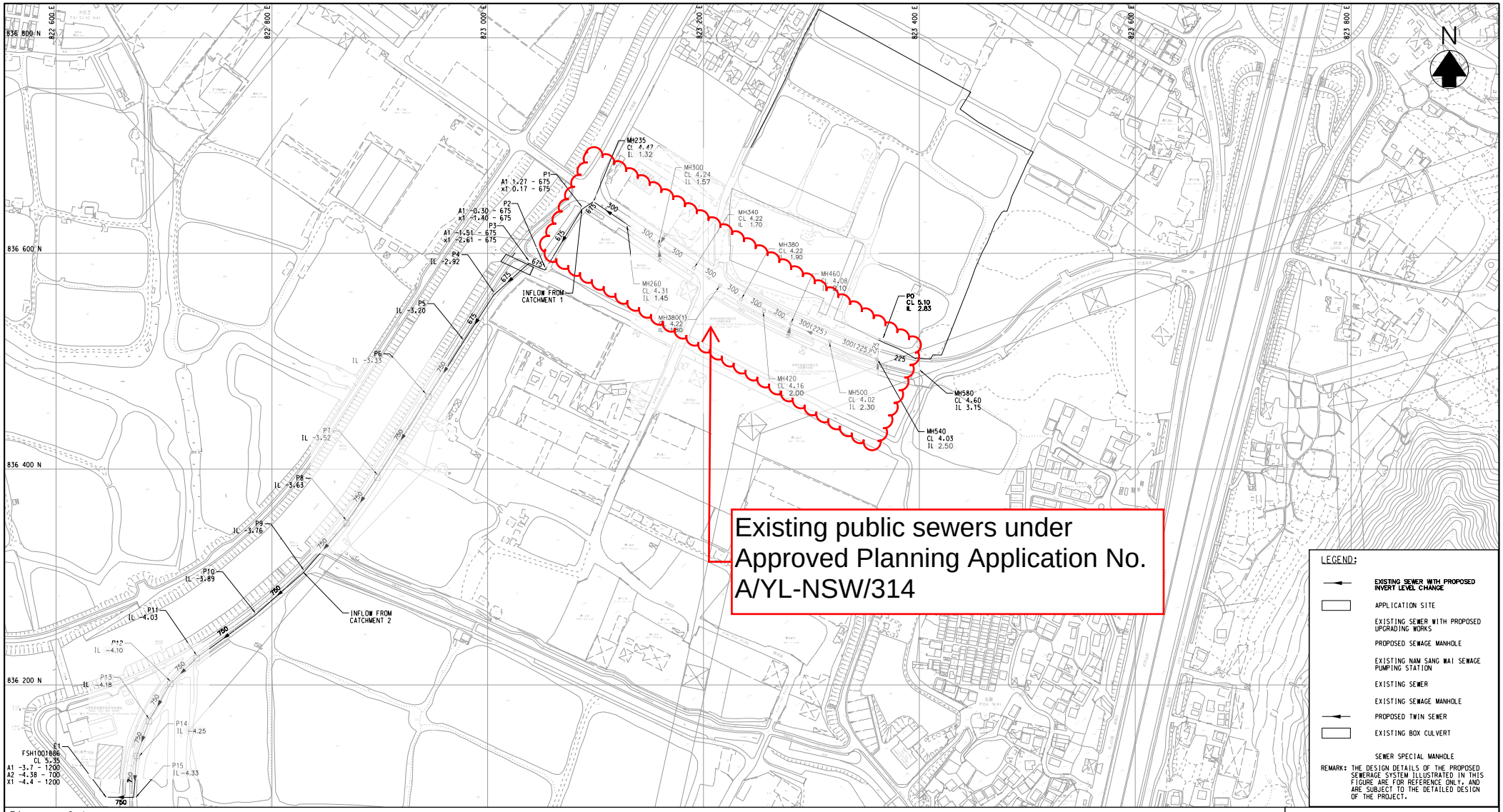

Figure: 2.1

Title: PROPOSED SEWERAGE SYSTEM FOR THE APPLICATION SITE

Project: PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE DEVELOPMENT SCHEME TO INCLUDE WETLAND RESTORATION PROPOSAL AND PROPOSED FILLING OF PONDS/LAND AND EXCAVATION OF LAND IN "OU(CDWRA)" ZONE AT VARIOUS LOTS IN D.D. 104, NORTH OF KAM POK ROAD EAST, POK WAI, YUEN LONG, NEW TERRITORIES

RAMBOLL

Drawn by:	CL
Checked by:	NH
Rev:	6.1
Date:	Aug 2023

Plot date : 2023/11/16 User : Che15680

File : Y:\Daily Work\20231115e\Figure2.1.dgn

APPENDIX D
PLANNED COMMUNAL GRAVITY SEWERS UNDER OTHER APPROVED APPLICATION

Total Flow from Proposed Development			
Flow rate	=	125.3	m^3/day
Contributing population *	=	464	People
Peaking factor	=	8	– (Table T-5 of GESF for population <1,000 incl. stormwater allowance)
Peak flow	=	11.60	litre/sec

Note:

1. According to the submitted planning statement for current proposed development, the concerned dwellings will comprise 2-storeys to 4-storeys housing units with an average household size is assumed to be 3 people.
2. * according to the calculation method in GESF for the so-called "Contributing Population" for peaking factor selection.

2.4.2 The average flow and the peak flow from the Application Site will be approximately 125.3 m^3/day and 11.60 L/s, respectively.

2.5 Sewerage Impact Assessment

2.5.1 It is proposed that the sewage generated from the Proposed Development will be discharged into the existing 225mm diameter communal sewer at the south of the Application Site for disposal at YLSTW via Nam Sang Wai SPS (**Figure 2.1** refers). Relevant proposed upgrading works and proposed change in invert levels at some of the existing sewers, are also illustrated in **Figure 2.1** such as those between sewer MH540 to MH460, and between MH460 and MH235. The hydraulic checking of existing and proposed sewers starting from the discharge point to Nam Sang Wai SPS is provided in **Appendix 2.1** and it is found to be adequate to serve the Proposed Development with upgrading and modification works on several sewer segments.

2.5.2 There are existing stormwater pipe and box culvert along Pok Wai South Road, which are in vicinity of the proposed sewage sys rawings of the proposed sewers and the existing **.3**.

2.5.3 It is understood there are other planned r, none of these have a solid development schedu roposed sewer P1 to E1 as shown in **Figure 2.1** become public sewers. Manhole P1, P2 and P3 are designed as backdrop manhole to cater for the high velocity flow and to avoid the box culvert located at the outfall at Pok Wai South Road at the same time. In order to ensure there is sufficient capacity reserved, a sensitivity test has also been undertaken and provided in **Appendix 2.2**. It is understood that the gravity sewer P1 to E1 should have sufficient capacity to cater the additional sewage of around 15,000 m^3/d due to other nearby developments (**Appendix 4.1** refers). This is considered to be a very conservative approach. It is therefore suggested to provide twin 675 mm to 750 mm gravity sewers for sewer P1 to E1 along the Pok Wai South Road. The design checking of proposed sewage system, considering a capacity of 15,000 m^3/d from nearby developments, is provided in

Planned communal gravity sewers under Approved Planning Application No. A/YL-NSW/314

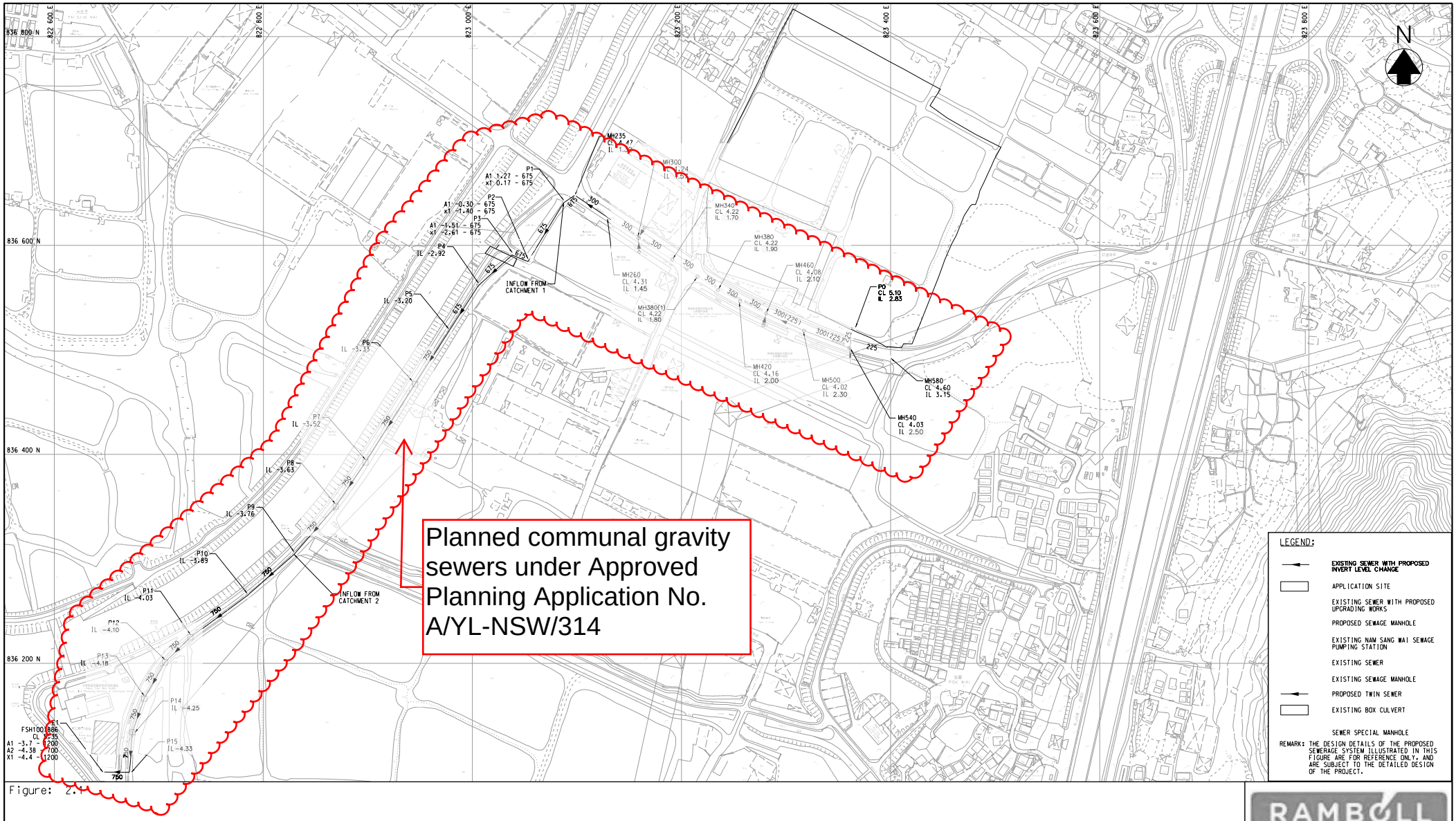

Figure: 2.1

Title: PROPOSED SEWERAGE SYSTEM FOR THE APPLICATION SITE

Project: PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE DEVELOPMENT SCHEME TO INCLUDE WETLAND RESTORATION PROPOSAL AND PROPOSED FILLING OF PONDS/LAND AND EXCAVATION OF LAND IN "OU(CDWRA)" ZONE AT VARIOUS LOTS IN D.D. 104, NORTH OF KAM POK ROAD EAST, POK WAI, YUEN LONG, NEW TERRITORIES

RAMBOLL

Drawn by:	CL
Checked by:	NH
Rev:	6.1
Date:	Aug 2023

Plot date : 2023/11/16 User : Che15680

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Appendix 2.2 Hydraulic Calculation of the Proposed Sewers for the Application Site (Sensitivity Analysis)

Note:

1) Colebrook-White's equation is adopted for full-bore pipe velocity calculation.
2) Backwash Flowrate generated by swimming pool from developments, if any, has been included in the Design Peak Flowrate.
3) Catchment 1 is is the planned development in the upstream
4) Catchment 2 is the application Y/YL-NSW/7, the ADWF is obtained from the approved SIA Report at October 2023

Catchment 1. ADWF	=			13435	m3/day		Proposed Deve. ADWF	=	125.3	m3/day		Catchment 2, ADWF	=	1565	m3/day			
	=			13435/3600/24				=	125.3/3600/24				=	1565/3600/24				
	=			0.1555	m3/s			=	0.0015	m3/s			=	0.0181	m3/s			

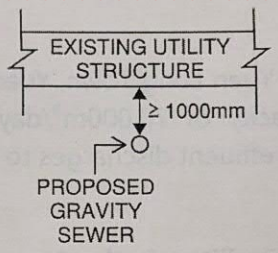
Pipe	Diameter (mm)	Diameter for calculation	Orginal Diameter	Upstream Invert Level (mPD)	Downstream Invert Level (mPD)	Pipe Length (m)	Gradient (1 in)	Roughness (mm)	No. of Pipes	Inflow	ADWF (m^3/s)	Contributing Population	Peak Factor	Design Peak Flowrate (m^3/s)	Full Bore Velocity (m/s)	Full Bore Capacity (m^3/s)	Utilization (%)
P0 to MH540	225	225	225	2.83	2.50	18.910	57	3.000	1	Proposed Deve.	0.0015	464	8	0.012	1.354	0.054	21.6%
MH540 to MH500	300	300	300	2.50	2.30	46.020	230	3.000	1	Proposed Deve.	0.0015	464	8	0.012	0.819	0.058	20.0%
MH500 to MH460	300	300	300	2.30	2.10	39.640	198	3.000	1	Proposed Deve.	0.0015	464	8	0.012	0.882	0.062	18.6%
MH460 to MH420	300	300	300	2.10	2.00	27.370	274	3.000	1	Proposed Deve.	0.0015	464	8	0.012	0.751	0.053	21.9%
MH420 to MH380	300	300	300	2.00	1.90	23.630	236	3.000	1	Proposed Deve.	0.0015	464	8	0.012	0.808	0.057	20.3%
MH380 to MH380(1)	300	300	300	1.90	1.80	23.230	232	3.000	1	Proposed Deve.	0.0015	464	8	0.012	0.815	0.058	20.1%
MH380(1) to MH340	300	300	300	1.80	1.70	28.910	289	3.000	1	Proposed Deve.	0.0015	464	8	0.012	0.730	0.052	22.5%
MH340 to MH300	300	300	300	1.70	1.57	38.240	294	3.000	1	Proposed Deve.	0.0015	464	8	0.012	0.724	0.051	22.7%
MH300 to MH260	300	300	300	1.57	1.45	34.900	291	3.000	1	Proposed Deve.	0.0015	464	8	0.012	0.728	0.051	22.5%
MH260 to MH235	300	300	300	1.45	1.32	38.840	299	3.000	1	Proposed Deve.	0.0015	464	8	0.012	0.718	0.051	22.9%
MH235 to P1	300	300	300	1.32	1.27	12.590	252	3.000	1	Proposed Deve.	0.0015	464	8	0.012	0.783	0.055	21.0%
P1 to P2	675	675	675	0.17	-0.30	65.790	140	3.000	2	Catchment 1, Proposed Deve.	0.1569	50,223	4.05684	0.637	1.794	1.284	49.6%
P2 to P3	675	675	675	-1.40	-1.51	16.250	148	3.000	2	Catchment 1, Proposed Deve.	0.1569	50,223	4.05684	0.637	1.746	1.250	50.9%
P3 to P4	675	675	675	-2.61	-2.92	43.380	140	3.000	2	Catchment 1, Proposed Deve.	0.1569	50,223	4.05684	0.637	1.794	1.284	49.6%
P4 to P5	675	675	675	-2.92	-3.20	52.150	186	3.000	2	Catchment 1, Proposed Deve.	0.1569	50,223	4.05684	0.637	1.555	1.113	57.2%
P5 to P6	750	750	750	-3.20	-3.33	59.790	460	3.000	2	Catchment 1, Proposed Deve.	0.1569	50,223	4.05684	0.637	1.058	0.935	68.1%
P6 to P7	750	750	750	-3.33	-3.52	88.210	464	3.000	2	Catchment 1, Proposed Deve.	0.1569	50,223	4.05684	0.637	1.053	0.931	68.4%
P7 to P8	750	750	750	-3.52	-3.63	50.460	459	3.000	2	Catchment 1, Proposed Deve.	0.1569	50,223	4.05684	0.637	1.060	0.936	68.0%
P8 to P9	750	750	750	-3.63	-3.76	61.240	471	3.000	2	Catchment 1, Proposed Deve.	0.1569	50,223	4.05684	0.637	1.046	0.924	68.9%
P9 to P10	750	750	750	-3.76	-3.89	59.460	457	3.000	2	Catchment 1, Catchment 2, Proposed Deve.	0.1751	56,020	3.991	0.699	1.061	0.938	74.5%
P10 to P11	750	750	750	-3.89	-4.03	67.200	480	3.000	2	Catchment 1, Catchment 2, Proposed Deve.	0.1751	56,020	3.991	0.699	1.036	0.915	76.3%
P11 to P12	750	750	750	-4.03	-4.10	34.060	487	3.000	2	Catchment 1, Catchment 2, Proposed Deve.	0.1751	56,020	3.991	0.699	1.029	0.909	76.8%
P12 to P13	750	750	750	-4.10	-4.18	39.540	494	3.000	2	Catchment 1, Catchment 2, Proposed Deve.	0.1751	56,020	3.991	0.699	1.021	0.902	77.5%
P13 to P14	750	750	750	-4.18	-4.25	33.830	483	3.000	2	Catchment 1, Catchment 2, Proposed Deve.	0.1751	56,020	3.991	0.699	1.032	0.912	76.6%
P14 to P15	750	750	750	-4.25	-4.33	38.830	485	3.000	2	Catchment 1, Catchment 2, Proposed Deve.	0.1751	56,020	3.991	0.699	1.030	0.910	76.7%
P15 to E1	750	750	750	-4.33	-4.38	23.630	473	3.000	2	Catchment 1, Catchment 2, Proposed Deve.	0.1751	56,020	3.991	0.699	1.044	0.923	75.7%

Details of the planned communal gravity sewers under the Approved Application No. A/YL-NSW/314

with necessary manholes will be constructed from the Proposed Development and connect to the existing NSWSPS. No private land will be affected for making such connection.

4.1.3 As per EPD request, the proposed gravity sewers have taken account the sewage flow from other sites in the vicinity leading to NSWSPS via Pok Wai South Road. The proposed sewage disposal scheme, proposed sewer longitudinal profile and calculations of design flow and manhole schedule are shown in **Figure 2**, **Figure 3** and **Annex 4** respectively. Clearance of not less than 1000mm will be maintained between the proposed sewers and existing utility structures (i.e. 2 cells 4000x2950 Box Culvert at J/O Kam Pok Road and Pok Wai West Road and 4 cells 2500x2000 trunk box culvert at Pok Wai South Road near Pok Wai West Road).

planned communal gravity sewers under Approved Planning Application No. Y/YL-NSW/7



Section showing the interface between existing utility structure and proposed gravity sewer

4.1.4 The design capacity of NSWSPS is 42,921m^3/day in ADWF and the average daily flow recorded in December 2021 is around 3,600m^3/day (see **Annex 3**). Based on the calculations shown in **Table 2**, the estimated sewage to be generated from the Proposed Development is 1,565m^3/day, which is only equivalent to 3.6% of existing NWSPS design capacity and 2.2% of existing YLSTW design capacity. Therefore, it is considered that sewage generated by the Proposed Development would not overload NSWSPS and YLSTW.

4.1.5 A matrix for different type of proposed sewerage system is provided in **Table 3** to summarize the construction and maintenance responsibilities.

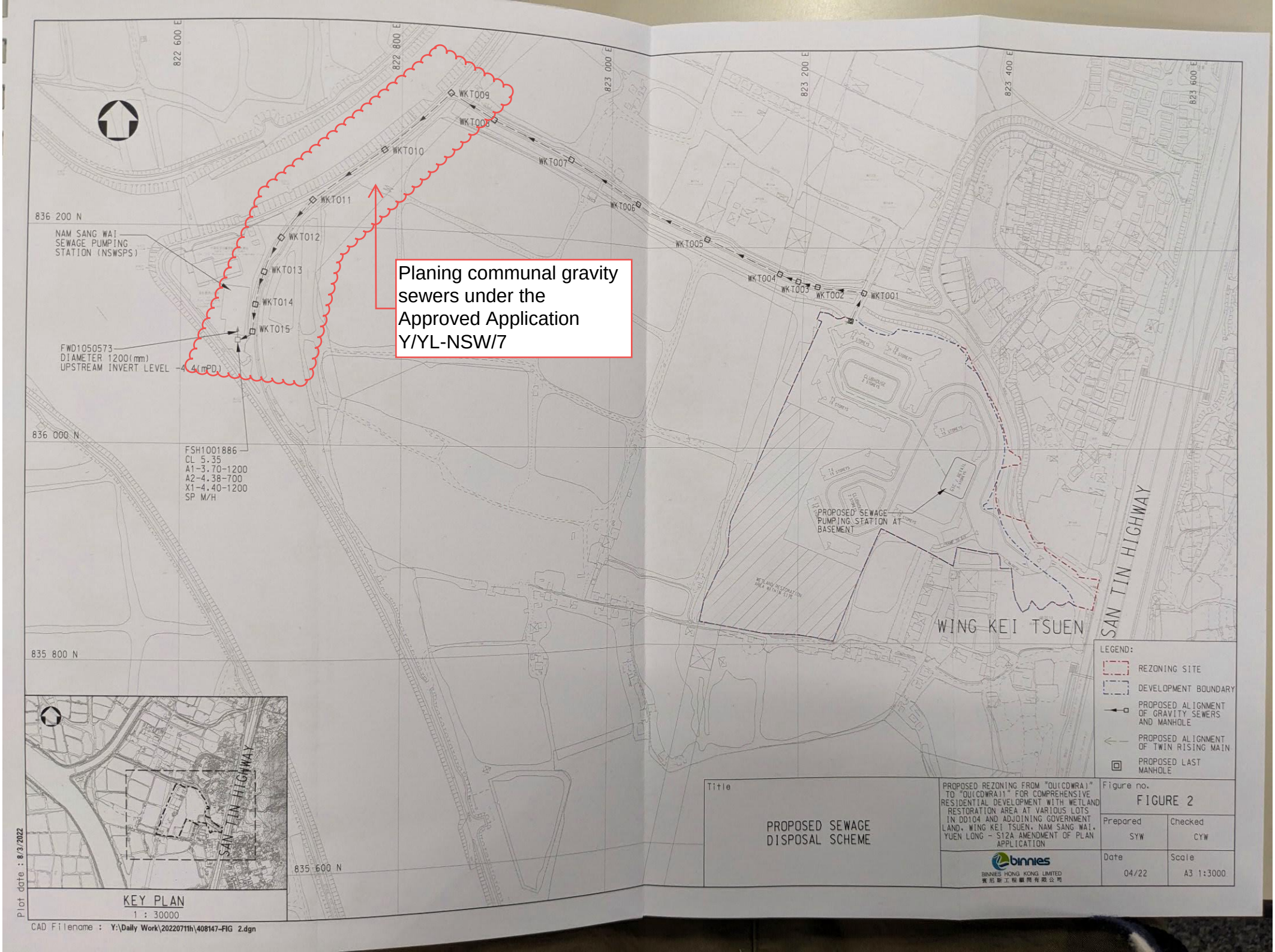
Table 3 – Matrix of construction and maintenance responsibilities

Element	Location	Construction Responsibility	Maintenance Responsibility
Proposed Sewage Pumping Station	Within Development Boundary	The Developer	The Developer
Proposed Rising Mains	Within Development Boundary	The Developer	The Developer
Proposed Terminal Manhole	Within Development Boundary	The Developer	The Developer
Proposed Sewers and Manholes	Outside Development Boundary	The Developer	DSD

Matrix of construction and maintenance responsibilities under the Approved Application Y/YL-NSW/7

5. EVALUATION OF THE STRATEGY AND RECOMMENDATIONS

5.1 Regional sewerage strategy


822 600 E
822 800 E
823 000 E
823 200 E
823 400 E
823 600 E
836 200 N
836 000 N
835 800 N
835 600 N
WKT009
WKT008
WKT010
WKT007
WKT011
WKT006
WKT012
WKT005
WKT013
WKT004
WKT014
WKT003
WKT002
WKT001
WKT015
NAM SANG WAI SEWAGE PUMPING STATION (NSWSPS)
FWD1050573
DIAMETER 1200(mm)
UPSTREAM INVERT LEVEL -4.44(mPD)
FSH1001886
CL 5.35
A1-3.70-1200
A2-4.38-700
X1-4.40-1200
SP M/H
Planing communal gravity sewers under the Approved Application Y/YL-NSW/7
PROPOSED SEWAGE PUMPING STATION AT BASEMENT
WING KEI TSUEN
SAN TIN HIGHWAY
KEY PLAN
1 : 30000
LEGEND:
REZONING SITE
DEVELOPMENT BOUNDARY
PROPOSED ALIGNMENT OF GRAVITY SEWERS AND MANHOLE
PROPOSED ALIGNMENT OF TWIN RISING MAIN
PROPOSED LAST MANHOLE
Title
PROPOSED SEWAGE DISPOSAL SCHEME
PROPOSED REZONING FROM "OU(CDWRA)" TO "OU(CDWRA)1" FOR COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH WETLAND RESTORATION AREA AT VARIOUS LOTS IN DD104 AND ADJOINING GOVERNMENT LAND, WING KEI TSUEN, NAM SANG WAI, YUEN LONG - S12A AMENDMENT OF PLAN APPLICATION
Figure no.
FIGURE 2
Prepared
SYW
Checked
CYW
Date
04/22
Scale
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BINNIES HONG KONG LIMITED
Plot date : 8/3/2022
CAD Filename : Y:\Daily Work\20220711h\408147-FIG 2.dgn

PROPOSED REZONING FROM "OU(CDWRA)" TO "OU(CDWRA)1"
FOR COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH WETLAND RESTORATION AREA
AT VARIOUS LOTS IN DD104 AND ADJOINING GOVERNMENT LAND,
WING KEI TSUEN, NAM SANG WAI, YUEN LONG – S12A AMENDMENT OF PLAN APPLICATION

Manhole Schedule - Wing Kei Tsuen

Manhole No.	Manhole type	Backdrop manhole required	Manhole type (Combine)	To Manhole	From Manhole	Ground Level (mPD)	PIPE IN			PIPE OUT			
							Invert Level (mPD)	Pipe Size (mm) DN	Pipe Size (mm) OD	Invert Level (mPD)	IL Check	Pipe Size (mm) DN	Pipe Size (mm) OD
WKT000	L	-	L	WKT001	WKT000	4.70	-0.27	351.35	400.00	-0.36	OK	351.35	400.00
WKT001	L	No	L	WKT002	WKT001	4.60	-0.36	491.85	560.00	-0.50	OK	491.85	560.00
WKT002	L	No	L	WKT003	WKT002	4.90	-0.50	491.85	560.00	-0.56	OK	491.85	560.00
WKT003	L	No	L	WKT004	WKT003	4.85	-0.56	491.85	560.00	-0.63	OK	491.85	560.00
WKT004	L	No	L	WKT005	WKT004	4.80	-0.63	491.85	560.00	-0.90	OK	491.85	560.00
WKT005	L	No	L	WKT006	WKT005	4.75	-0.90	491.85	560.00	-1.16	OK	491.85	560.00
WKT006	L	No	L	WKT007	WKT006	4.70	-1.16	491.85	560.00	-1.43	OK	491.85	560.00
WKT007	L	No	L	WKT008	WKT007	4.50	-1.43	491.85	560.00	-1.70	OK	491.85	560.00
WKT008	Special Type 1	No	Special Type 1	WKT009	WKT008	4.70	-1.70	491.85	560.00	-1.85	OK	491.85	560.00
WKT009	L	No	L	WKT010	WKT009	4.20	-1.85	623.60	710.00	-2.11	OK	623.60	710.00
WKT010	L	No	L	WKT011	WKT010	4.00	-2.11	623.60	710.00	-2.38	OK	623.60	710.00
WKT011	Special Type 1	No	Special Type 1	WKT012	WKT011	4.15	-2.38	623.60	710.00	-2.53	OK	623.60	710.00
WKT012	Special Type 1	No	Special Type 1	WKT013	WKT012	4.20	-2.53	623.60	710.00	-2.65	OK	623.60	710.00
WKT013	Special Type 1	No	Special Type 1	WKT014	WKT013	4.15	-2.65	623.60	710.00	-2.75	OK	623.60	710.00
WKT014	Special Type 1	No	Special Type 1	WKT015	WKT014	4.10	-2.75	623.60	710.00	-2.83	OK	623.60	710.00
WKT015	Special Type 1	No	Special Type 1	Existing	WKT015	4.05	-2.83	623.60	710.00	-2.88	OK	623.60	710.00

Details of the planned communal gravity sewers under the Approved Application No. Y/YL-NSW/7

Manhole No.	Material of pipe	Velocity (m/s)	Velocity check	Cumulative Design Flow (m3/s)	Full Bore Capacity (m3/s)	Full Bore Capacity with 10% reduction (m3/s)	Usage percentage (%)	Capacity check	TYPE OF BEDDING		
WKT000	HDPE	1.22	OK	0.072	0.118	0.107	67.98	OK	TYPE B BEDDING		
WKT001	HDPE	1.51	OK	0.166	0.287	0.258	64.46	OK	TYPE B BEDDING		
WKT002	HDPE	1.51	OK	0.166	0.287	0.258	64.46	OK	TYPE B BEDDING		
WKT003	HDPE	1.51	OK	0.166	0.287	0.258	64.46	OK	TYPE B BEDDING	20.00	300
WKT004	HDPE	1.51	OK	0.166	0.287	0.258	64.46	OK	TYPE B BEDDING	80.00	300
WKT005	HDPE	1.51	OK	0.166	0.287	0.258	64.46	OK	TYPE B BEDDING	80.00	300
WKT006	HDPE	1.51	OK	0.166	0.287	0.258	64.46	OK	TYPE B BEDDING	80.00	300
WKT007	HDPE	1.51	OK	0.166	0.287	0.258	64.46	OK	TYPE B BEDDING	80.00	300
WKT008	HDPE	1.51	OK	0.166	0.287	0.258	64.46	OK	TYPE B BEDDING	45.00	300
WKT009	HDPE	1.75	OK	0.320	0.535	0.481	66.56	OK	TYPE B BEDDING	80.00	300
WKT010	HDPE	1.75	OK	0.320	0.535	0.481	66.56	OK	TYPE B BEDDING	80.00	300
WKT011	HDPE	1.75	OK	0.320	0.535	0.481	66.56	OK	TYPE B BEDDING	45.00	300
WKT012	HDPE	1.75	OK	0.320	0.535	0.481	66.56	OK	TYPE B BEDDING	35.00	300
WKT013	HDPE	1.75	OK	0.320	0.535	0.481	66.56	OK	TYPE B BEDDING	30.00	300
WKT014	HDPE	1.75	OK	0.320	0.535	0.481	66.56	OK	TYPE B BEDDING	25.00	300
WKT015	HDPE	1.75	OK	0.320	0.535	0.481	66.56	OK	TYPE B BEDDING	15.00	300

Table 4-2: Comparison of Additional Sewage Flow with Capacity of Public Sewerage

Sewerage Facilities	Design Capacity (m^3/day) (1)	Current Average Daily Flow (m^3/day)	Estimated Future Flow(2) (m^3/day)	Total Future Flow (m^3/day)	Spare Capacity (m^3/day)
NSWSPS	42,921	3,900	16,561	20,461	22,460

Notes:

1) *For NSWSPS and YLEPP, the design capacity and current average daily flow comparison refer to ADWF.*
2) *The estimated future flow includes the EPD initial estimation for the communal gravity sewers (i.e., 15,500 m^3/d) and the estimated sewage flow from light public housing (i.e., 1,061 m^3/d). The estimated sewage flow from light public housing is based on the technical schedule of "Light Public Housing at Yau Pok Road, Yuen Long - Project Profile". **Appendix 3 and 4** refers.*

4.2.2. The sewage from the Development (i.e. 1,973m^3/day) merely occupies 5% of the design capacity of existing NSWSPS, 2% of the design capacity of existing YLEPP (phase I) and 1% of the design capacity of planned YLEPP (Phase II). Hence no adverse impact on the existing NSWSPS, existing YLEPP (Phase I) and planned YLEPP (Phase II) is envisaged. The assessment also shows that the existing and planned sewerage system would be sufficient to cater for the proposed development.

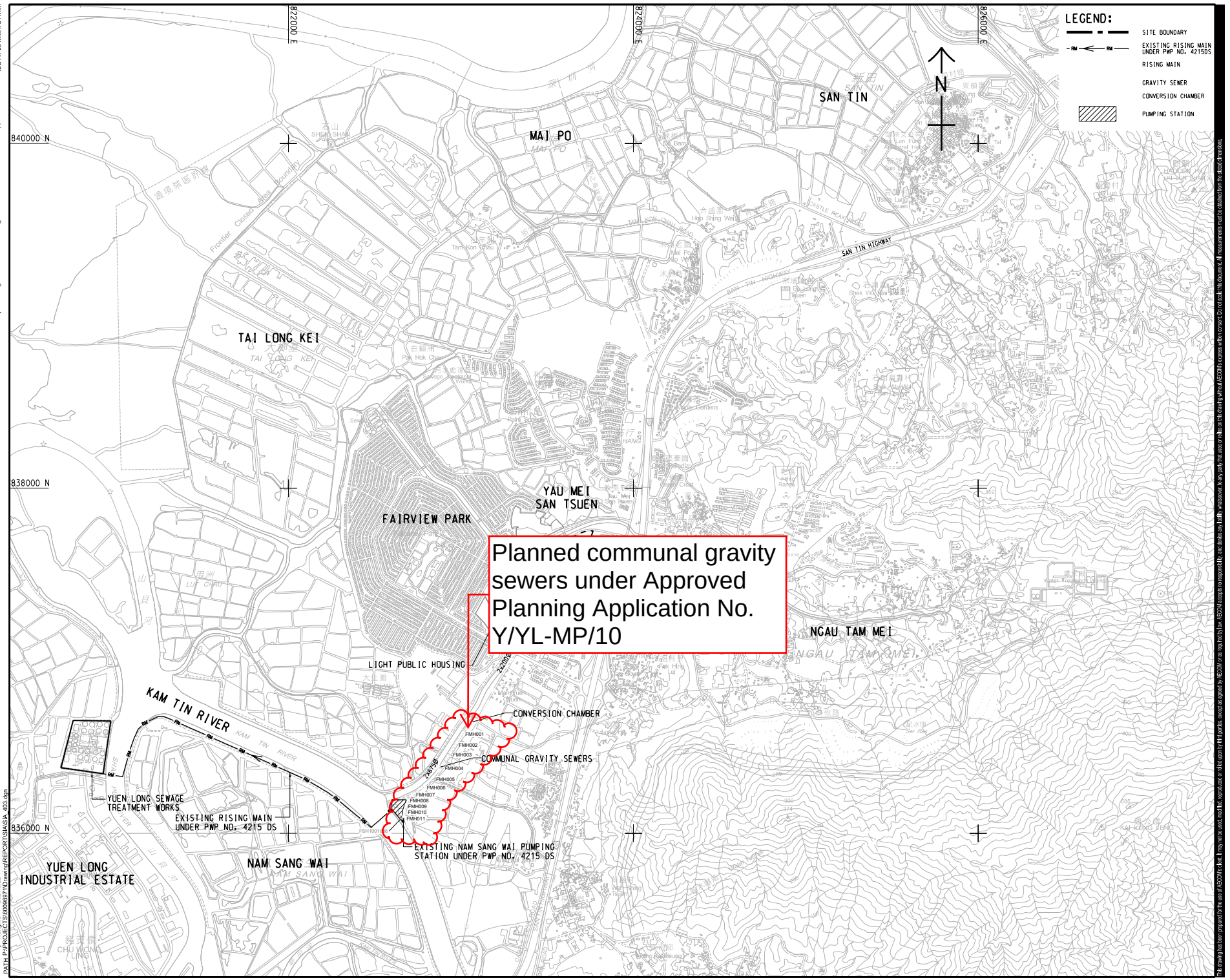
4.2.3. It is noted a light public housing site is located within the vicinity. The location of the light public housing site is as shown in **Figure 3**. The sewage (i.e. ADWF=1,061m^3/day) generated will be conveyed to NSWSPS via exclusive sewage rising [illegible] site only.

Planned communal gravity sewers under Approved Planning Application No. Y/YL-MP/10

4.3. Pro[illegible]

4.3.1. The [illegible]ed development will be conveyed to a private underground sewage pumping station (SPS) located at the western boundary of the site. It is proposed that twin 200mm dia. rising mains will lay along Kam Pok Road to convey the sewage to a proposed common conversion chamber at Pok Wai South Road. The conversion chamber connected to proposed communal gravity sewers downstream is designed to cater for other existing and planned developments within the area. The proposed communal gravity sewers and manholes also facilitate future discharge of sewage from other development in the vicinity. The proposed downstream communal gravity sewers and manholes are proposed public sewerage system serving multiple users. The sewer will be constructed to discharge the sewage from the proposed development to the existing NSWSPS and ultimately discharge to YLEPP. The proposed alignment of the rising mains and the gravity sewers is shown in **Figure 3**. The tentative location of the proposed private SPS is shown in **Figure 4**.

4.3.2. Hydraulic checking of the proposed rising mains has been conducted. It is found to be adequate to serve the proposed development, **Appendix 2** refers.



AECOM

PROJECT

S.12A PLANNING APPLICATION ON THE DRAFT MAI PO & FAIRVIEW PARK OZP NO. S/YL-MP/7 REZONING FROM "RESIDENTIAL (GROUP D)" TO "RESIDENTIAL (GROUP C) 1" ZONE FOR A PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 104 AND THE ADJOINING GOVERNMENT LAND IN YUEN LONG, N.T.

CLIENT

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE / **DIMENSION UNIT**

A3 1 : 20000 | METRES

KEY PLAN

PROJECT NO. / **AGREEMENT NO.**

60098971

SHEET TITLE

EXISTING AND PLANNED SEWERAGE NETWORK PLAN

SHEET NUMBER

60098971/SIA/FIGURE 3

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:
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Plot File by: WangMi9 2024/8/22
PATH: P:\PROJECTS\60098971\Drawing\REPORT\SIA\SIA_403.dgn

Hydraulic Assessment of Proposed Communal Sewer

AECOM

V of water = 0.000001 **m^2/s** 20˚C

Manhle No.		Pipe																
		Cover Level		Invert Level		Nominal Outside Diameter (OD)	Nominal Diameter (DN)	Length	Flow Area	Pipe Gradient	Pipe Velocity	Capacity (Twin Pipe)	Roughness (4)	Accumulated ADWF (5)	Contributing Population	Peaking Factor (6)	Estimated Peak Discharge	Capacity Check	Remark
U/S	D/S	U/S	D/S	U/S	D/S														
		mPD	mPD	mPD	mPD	mm	mm	m	m^2	(1 in)	m/s	m^3/s	mm	m^3/d			m^3/s	%	
Conversion Chamber	FMH001	4.50	4.50	-2.68	-2.87	800	675	75.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH001	FMH002	4.50	4.55	-2.87	-3.04	800	675	70.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH002	FMH003	4.55	4.60	-3.04	-3.22	800	675	70.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH003	FMH004	4.60	4.65	-3.22	-3.41	800	675	75.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH004	FMH005	4.65	4.20	-3.41	-3.61	800	675	80.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH005	FMH006	4.20	4.00	-3.61	-3.81	800	675	80.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH006	FMH007	4.00	4.15	-3.81	-4.01	800	675	80.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH007	FMH008	4.15	4.20	-4.01	-4.12	800	675	45.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH008	FMH009	4.20	4.15	-4.12	-4.21	800	675	35.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH009	FMH010	4.15	4.10	-4.21	-4.28	800	675	30.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH010	FMH011	4.10	4.05	-4.28	-4.34	800	675	25.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	
FMH011	FSH1001886	4.05	5.35	-4.34	-4.38	800	675	15.0	0.36	400	1.09	0.78	1.5	15,500	57,408	3.98	0.713	91	

Note:

1. Contributing population = Projected Flow + Flow from Development (ADWF in m^3/day) / 0.27 (m^3/person/day).
2. Peaking factor with stormwater allowance is adopted.
3. The proposed gravity sewer shall be constructed to discharge the sewage to from the both R(D) and REC Development and other residential development which has similar sewerage arrangement in the vicinity to the existing NSWSPS and ultimately to YLEPP.
4. Concrete sewers slimed to about half depth; velocity, when flowing half full, approximately 1.2 m/s, normal condition is as
5. Base on EPD initial estimation, the commual gravity sewer need to cater for design sewage flow of at least 15,500 m^3/d.
6. The communal gravity sewer is subject to detailed design, the hydraulic calculation demonstrate the feasibility in terms of

Details of the planned communal gravity sewers under the Approved Application No. Y/YL-MP/10