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

25 Jul 2025

Report No.: RT25285-EA-01B

Prepared By:

BeeXergy Consulting Limited (BXG)

[redacted]

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Report No.:	RT25285-EA-01B

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	25/07/2025	Updated AQIA and NIA	LY	YS	HM

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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 open 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

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. 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**. 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	Local Distributor	5m	>5m
Note: The road type of Kam Pok Road East is not available in the latest Annual Traffic Census (ATC) of the Transport Department (TD). As advised by the Project's Traffic Consultant, Kam Pok Road East (from Castle Peak Road - Tam Mi to Kam Pok Road) is classified as a Local Distributor			

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 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 chimney emission and odour emission have been evaluated. No industrial chimney 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. Noise from construction works is controlled by the Noise Control Ordinance Cap 400 C&D Regulations, which require equipment such as air compressor and hand held percussive breakers to comply with the noise emission standard and shall be fitted with noise emission label (NEL). 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 – 2/F	Communal Area	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.

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

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. 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	Communal Area	70	75
1/F	Dining Area	70	75
2/F	RCHE Dormitory	70	77
2/F	Communal Area	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.

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.

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
Open Storage	S01	Lorry Crane	145m
Open Storage	S02	Lorry Crane	175m
Open Storage	S03	Fork Lift	205m

3.4.22. An approved Section 16 application (Application No. A/YL-NSW/318) for the development of a public vehicle parking area 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**, all results complied with relevant nosie standard, therefore,, no adverse fixed noise

impact to the Proposed Development is expected.

3.5. CONCLUSION

Construction Phase

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.

Operation Phase

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.

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 2/23 “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
W01	Kam Tin River

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 2/23, 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. Outlets for each of the identified construction waste are summarized in below **Table 5.1**.

Table 5.1 Government Waste Facilities for Construction Waste

Government Waste Facilities	Type of Construction Waste Accepted
Public fill reception facilities	Consisting entirely of inert C&D materials [(a)]
Sorting facilities	Containing more than 50% by weight inert C&D materials [(a)]
Landfills [(b)]	Containing not more than 50% by weight of inert C&D materials [(a)]
Outlying Islands Transfer Facilities [(b)]	Containing any percentage of inert C&D materials [(a)]

Notes:

(a) Inert C&D materials means rock, rubble, boulder, earth, soil, sand, concrete, asphalt, brick, tile, masonry or used bentonite.

(b) If a load of waste contains construction waste and other wastes, that load will be regarded as consisting entirely of construction waste for the purpose of calculating the applicable charge.

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. 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. 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 178 residents, 90 workers and visitors will be occupied in the development. With a general refuse generation rate of 0.93kg per person per day, the maximum amount of general refuse to be generated will be about 294.2kg 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 0.004kg/day and a clinic waste generation rate of 0.002kg/day, it is anticipated that the maximum amount of other waste to be generated will be about 1.608kg 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.

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. Containers used for storage of chemical wastes will:

- Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;
- Have a capacity of less than 450L unless the specifications have been approved by the EPD; and
- Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations.

5.5.8. The storage area for chemical wastes will:

- Be clearly labelled and used solely for the storage of chemical waste;
- Be enclosed on at least 3 sides;
- Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest;
- Have adequate ventilation;
- Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and
- Be arranged so that incompatible materials are appropriately separated.

5.5.9. 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 and can supply the necessary chemical waste storage containers.

Measures for Management of General Refuse

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

impacts.

5.5.11. 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.

5.5.12. 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) during operation stage. 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.
W25185/RCHE-0001	Fire Services Department	-	Pending response from FSD

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. From 2019 to 2021, there were construction materials and construction equipment stored at the Project Site. 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

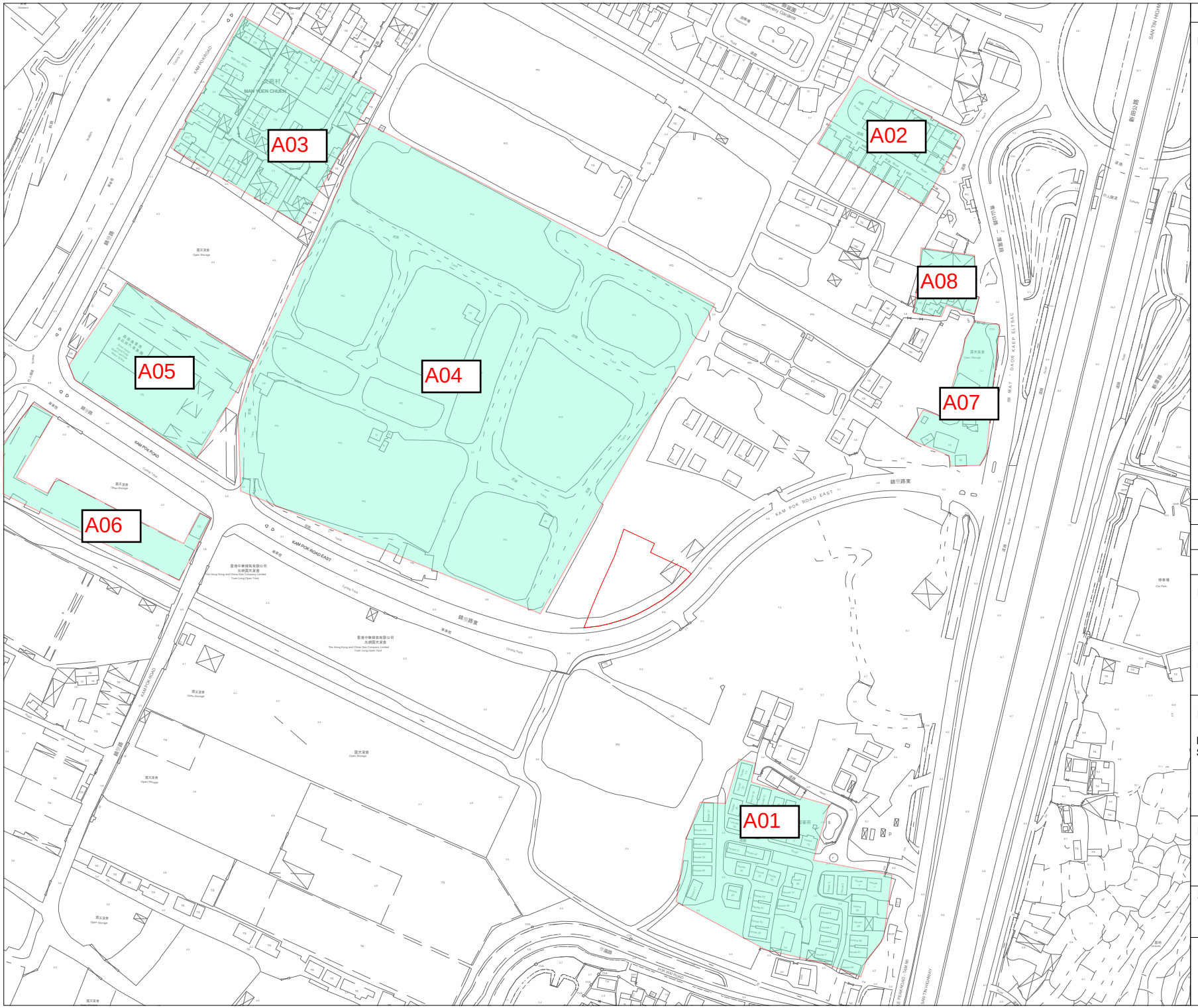
Scale:

A4 - 1:5500

BXG

BeeXergy Consulting Limited

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.	Rev.
FIGURE 2.1	0

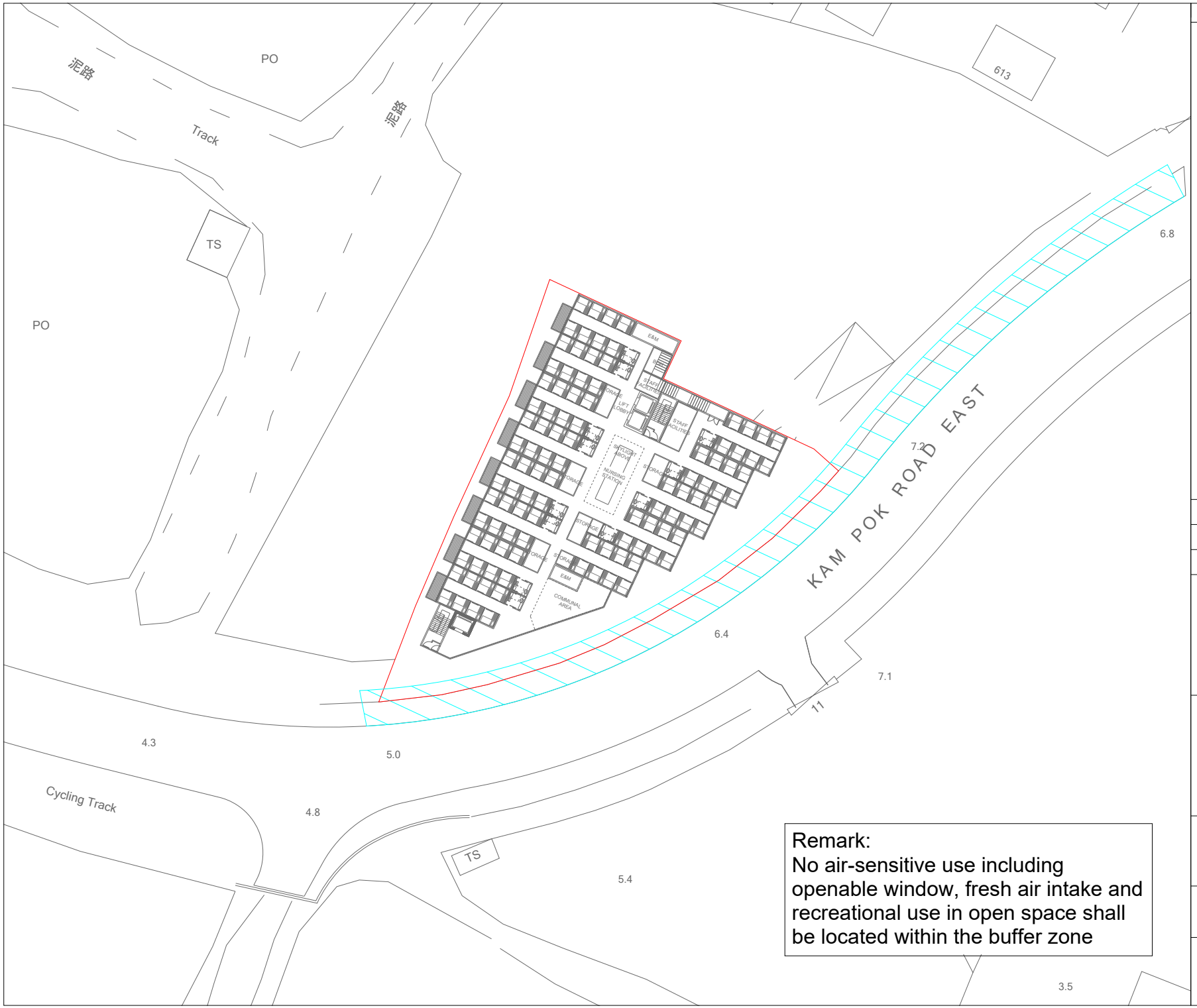
Scale:

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.

FIGURE 3.1

Rev.

0

Scale:

A4 - 1:3000

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	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 (1/F)

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

BXG

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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 (2/F)

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

BXG

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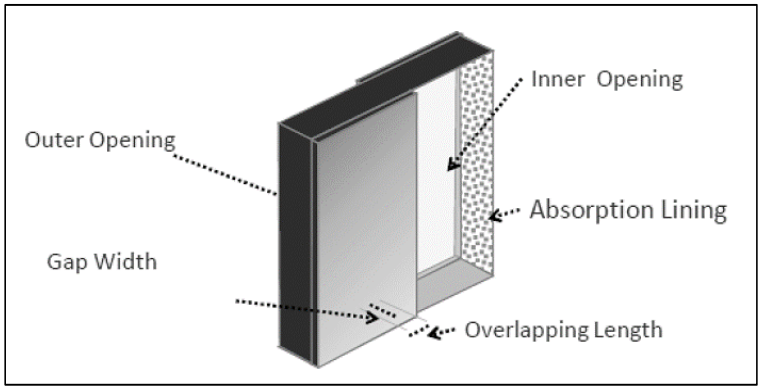
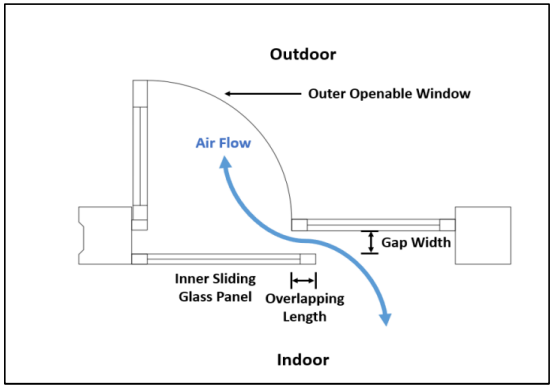
FIGURE 3.3
LOCATION OF PROPOSED ACOUSTIC WINDOW

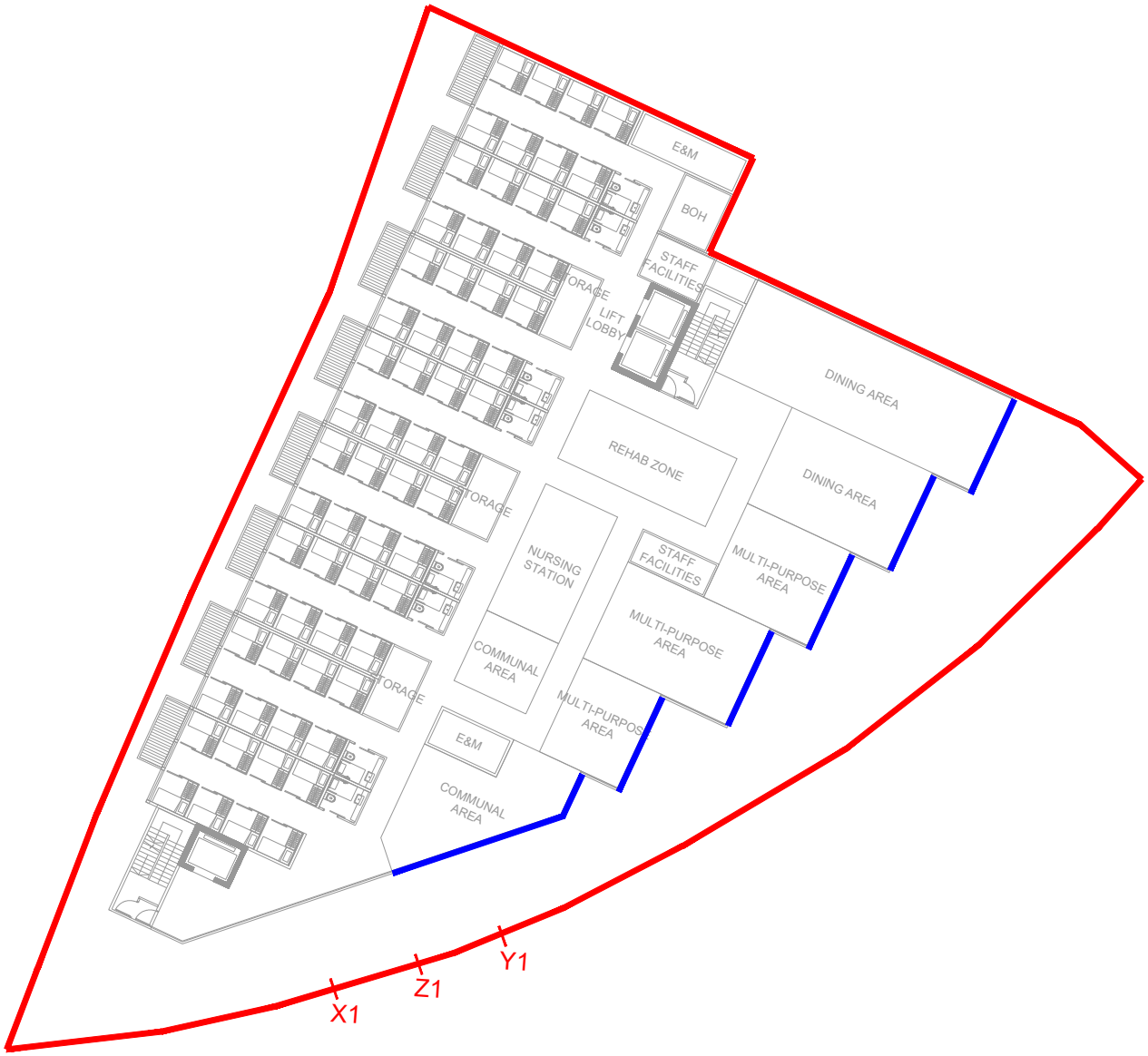
Proposed Types of Acoustic Window (Baffle Type)

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

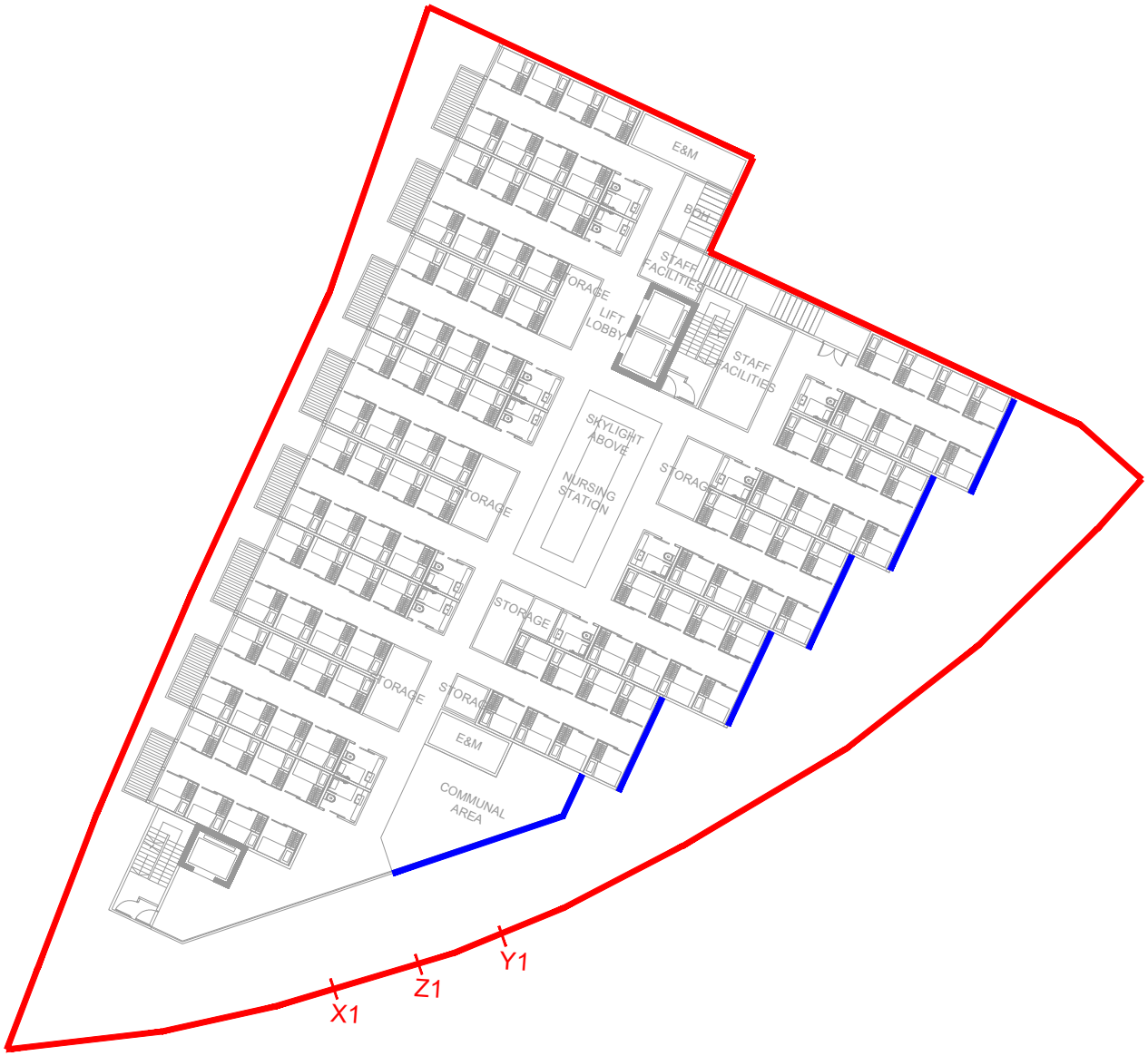
Figure Title

Location of Proposed Acoustic Window (1/F)

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

BXG

BeeXergy Consulting Limited



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 (2/F)

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

BXG

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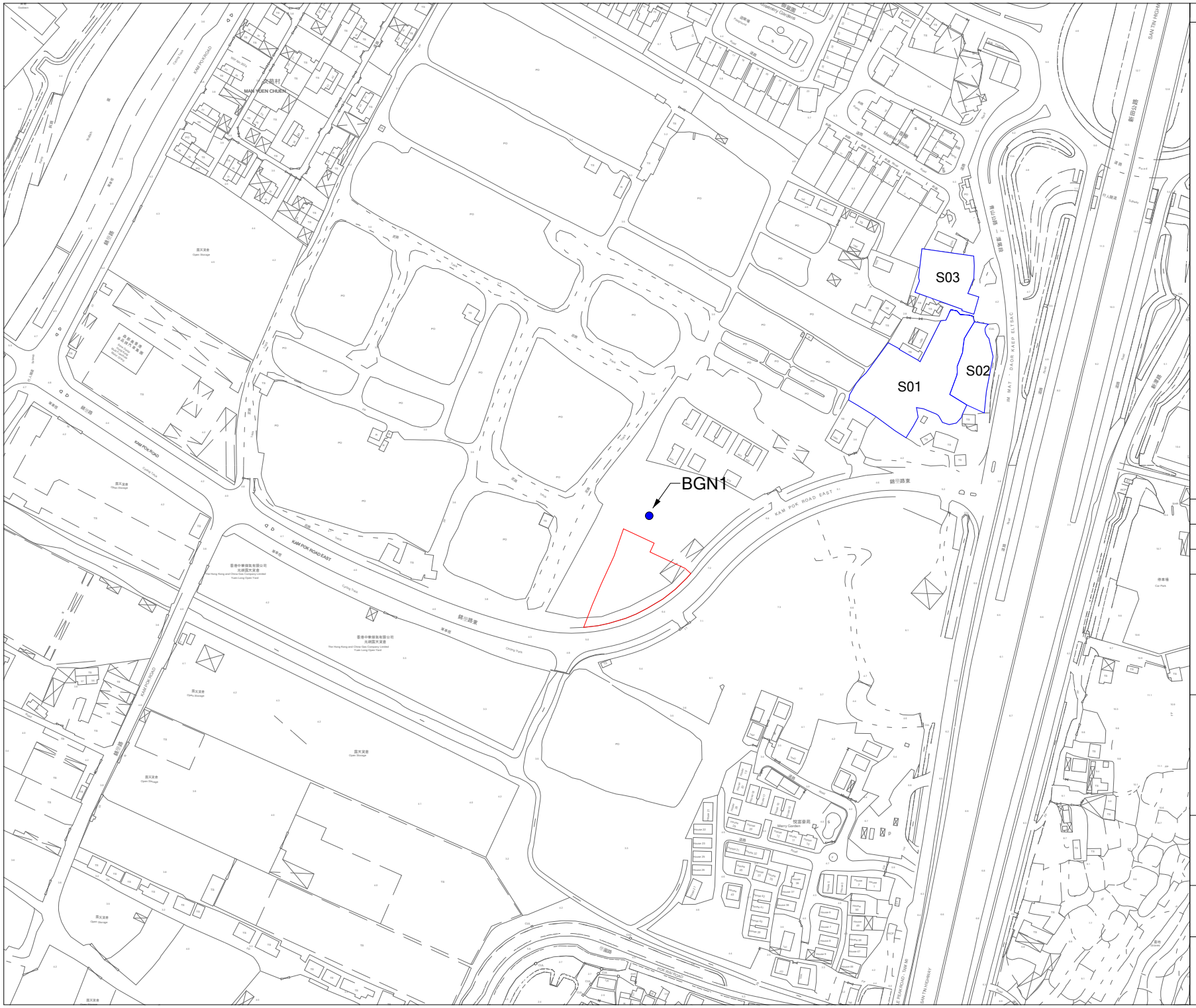
FIGURE 3.4

LOCATION OF BACKGROUND NOISE MEASUREMENT AND MAJOR FIXED NOISE SOURCES



LEGEND:

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

	Prepared	Checked	Approved
Initial	LY	YS	HM
Date	20250725	20250725	20250725

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

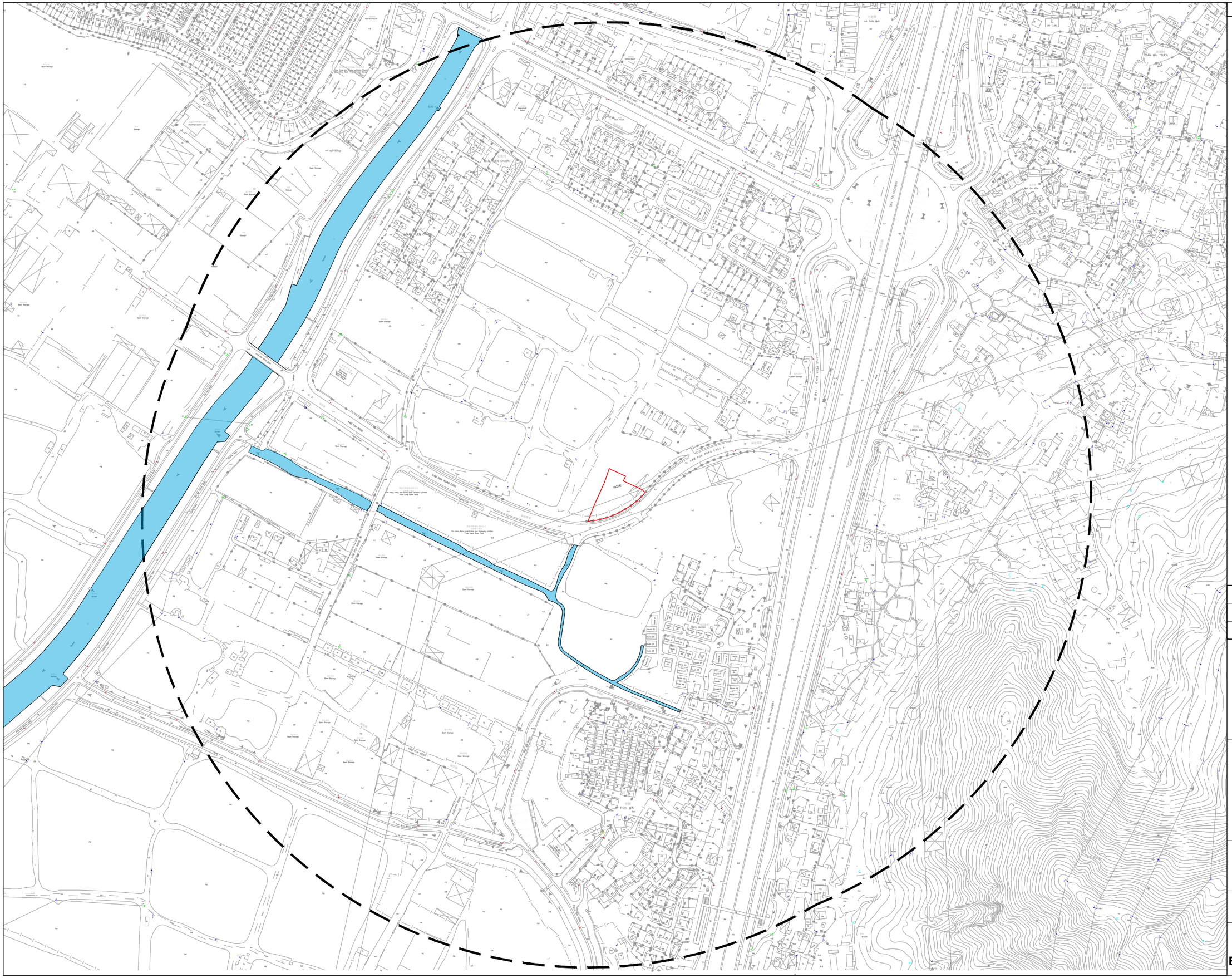
Scale:

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	20250623	20250623	20250623

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	0

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

BeeXergy Consulting Limited

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

BeeXergy Consulting Limited

APPENDIX 1.1
INDICATIVE BUILDING PLAN

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

NOTES:

LEGEND:

THE SITE

SHARED EVA

GOVERNMENT LAND

OVERHEAD LINES

EXISTING NOISE BARRIER

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

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 : MASTER LAYOUT PLAN

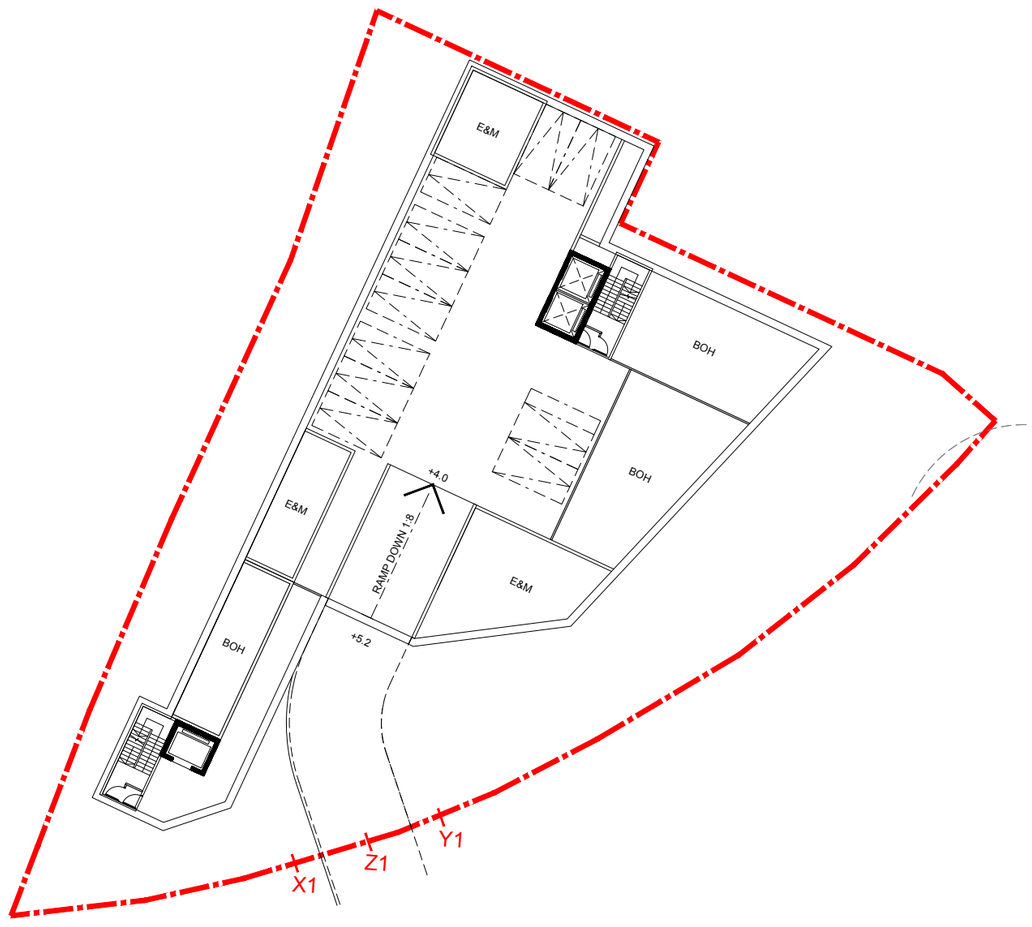
SCALE : 1: 400 @A3

Rev: —

PROJECT NO : 25001_KPR

Drawing No. : FIGURE 2

Date: MAY 2025



- BASEMENT FLOOR PLAN
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.

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DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

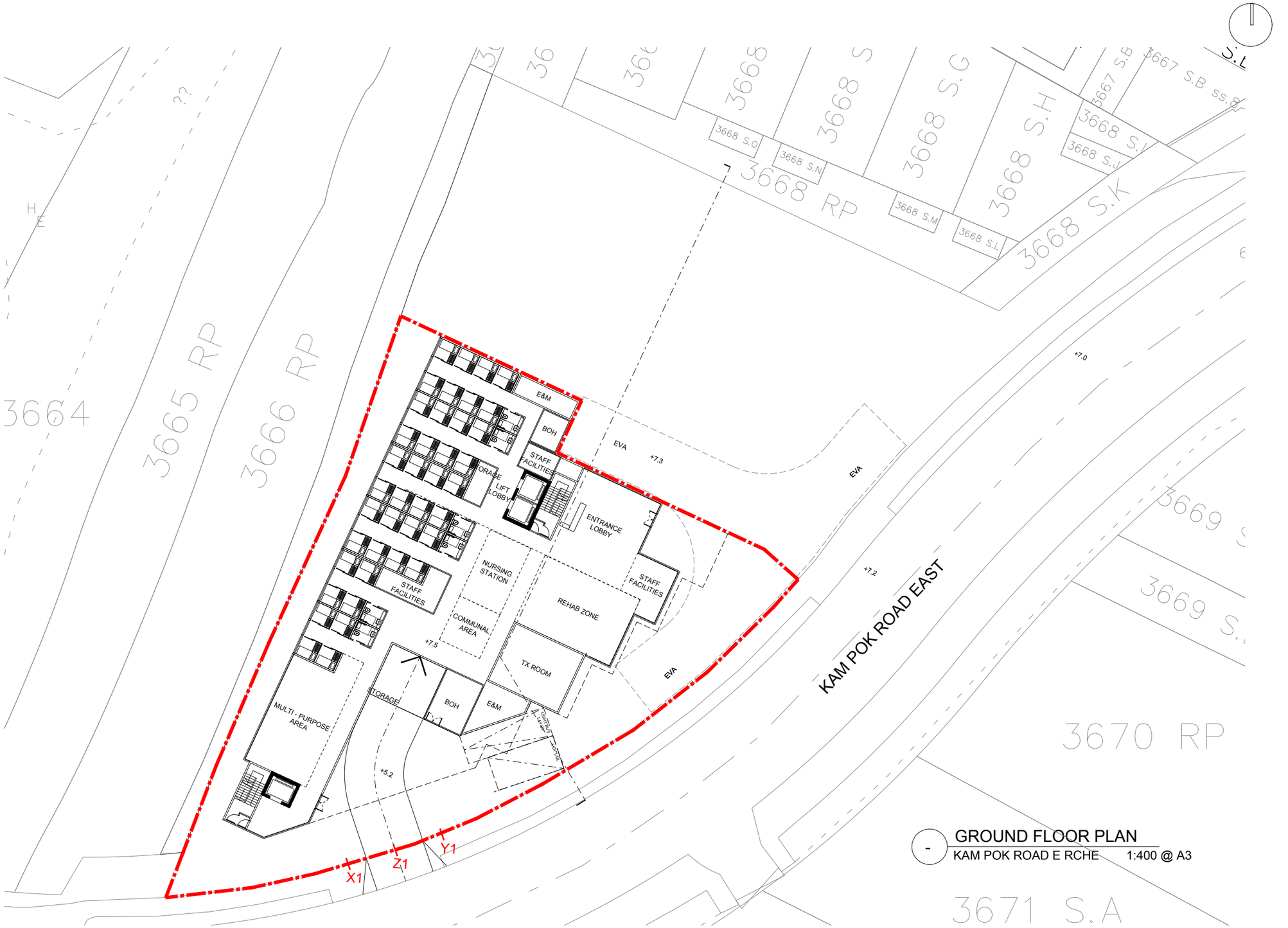
Syn Plus

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 : BASEMENT FLOOR PLAN

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

Drawing No. : CP-B102
Date: MAY 2025



- GROUND FLOOR PLAN
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.

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TOWN PLANNER

DeSPACE (International) Limited

ARCHITECT

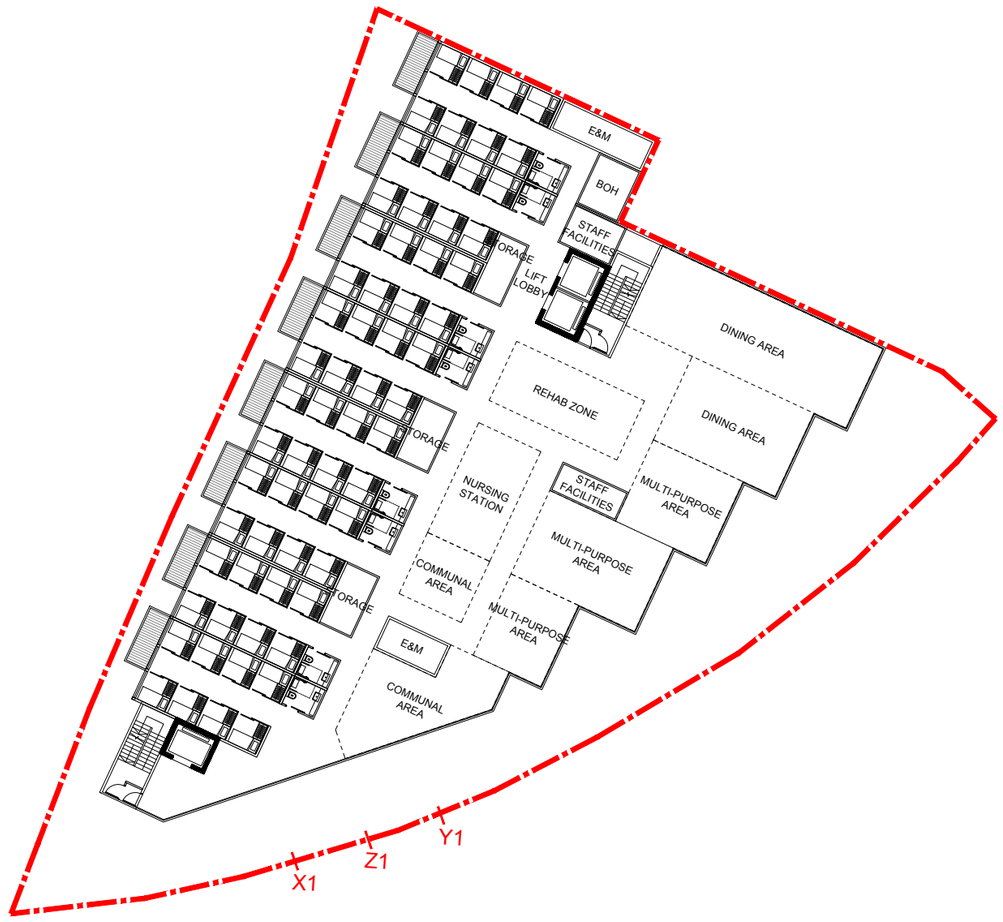
Vessel International Limited
Syn Plus Design Limited

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: —

Drawing No. : CP—B103
Date: MAY 2025



- 1ST FLOOR PLAN
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.

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TOWN PLANNER

DeSPACE (International) Limited

DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

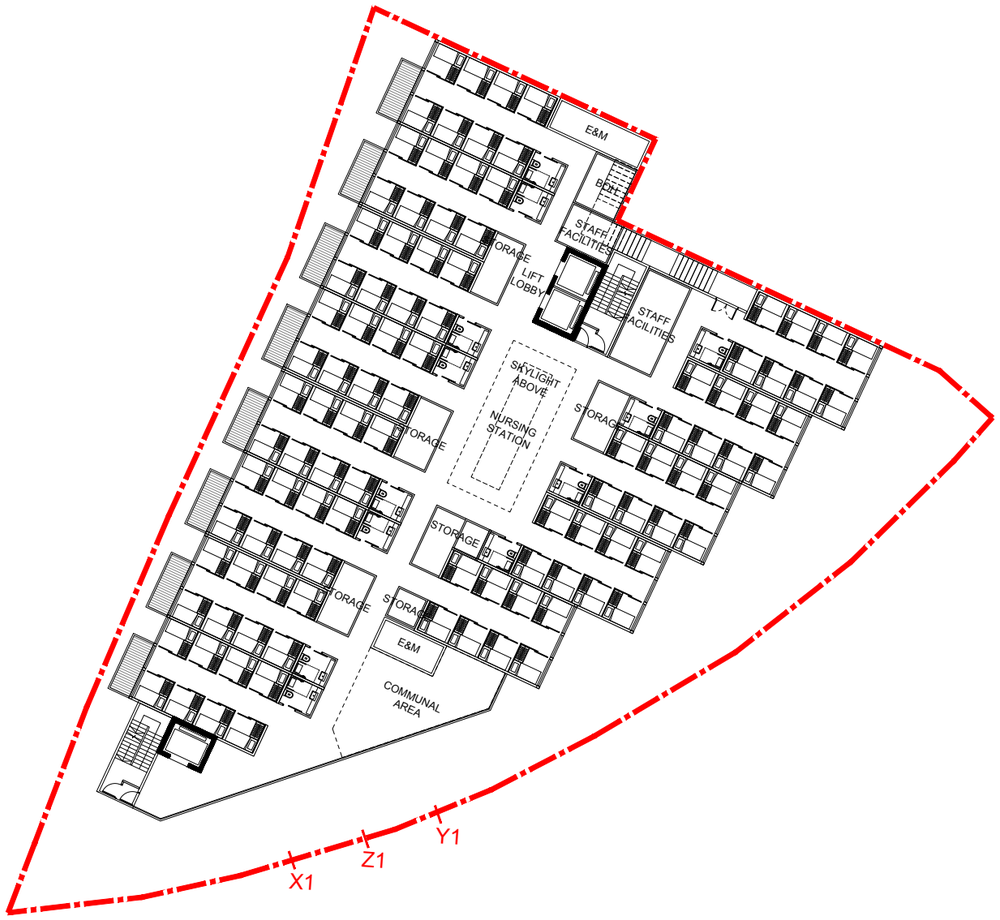
Syn Plus

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 : 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:

-	5.5.2025	CONCEPT DESIGN	KC	PC
REV	DATE	DESCRIPTION	BY	CHKD

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

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:

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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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 : ROOF PLAN

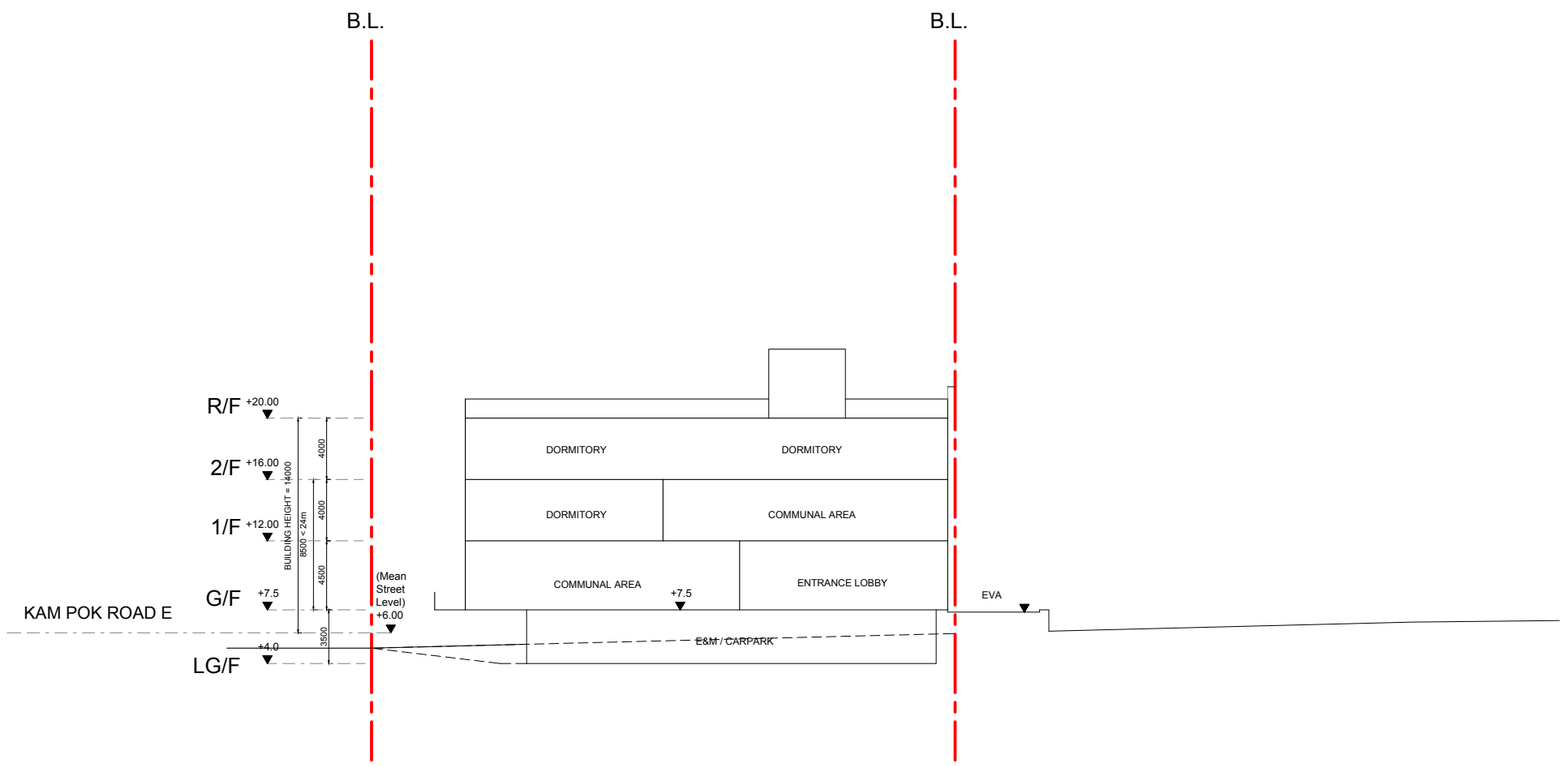
SCALE : 1: 400 @A3

Rev: —

PROJECT NO: 25001_KPR

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.

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TOWN PLANNER

DeSPACE (International) Limited

ARCHITECT

Vessel International Limited
Syn Plus Design Limited

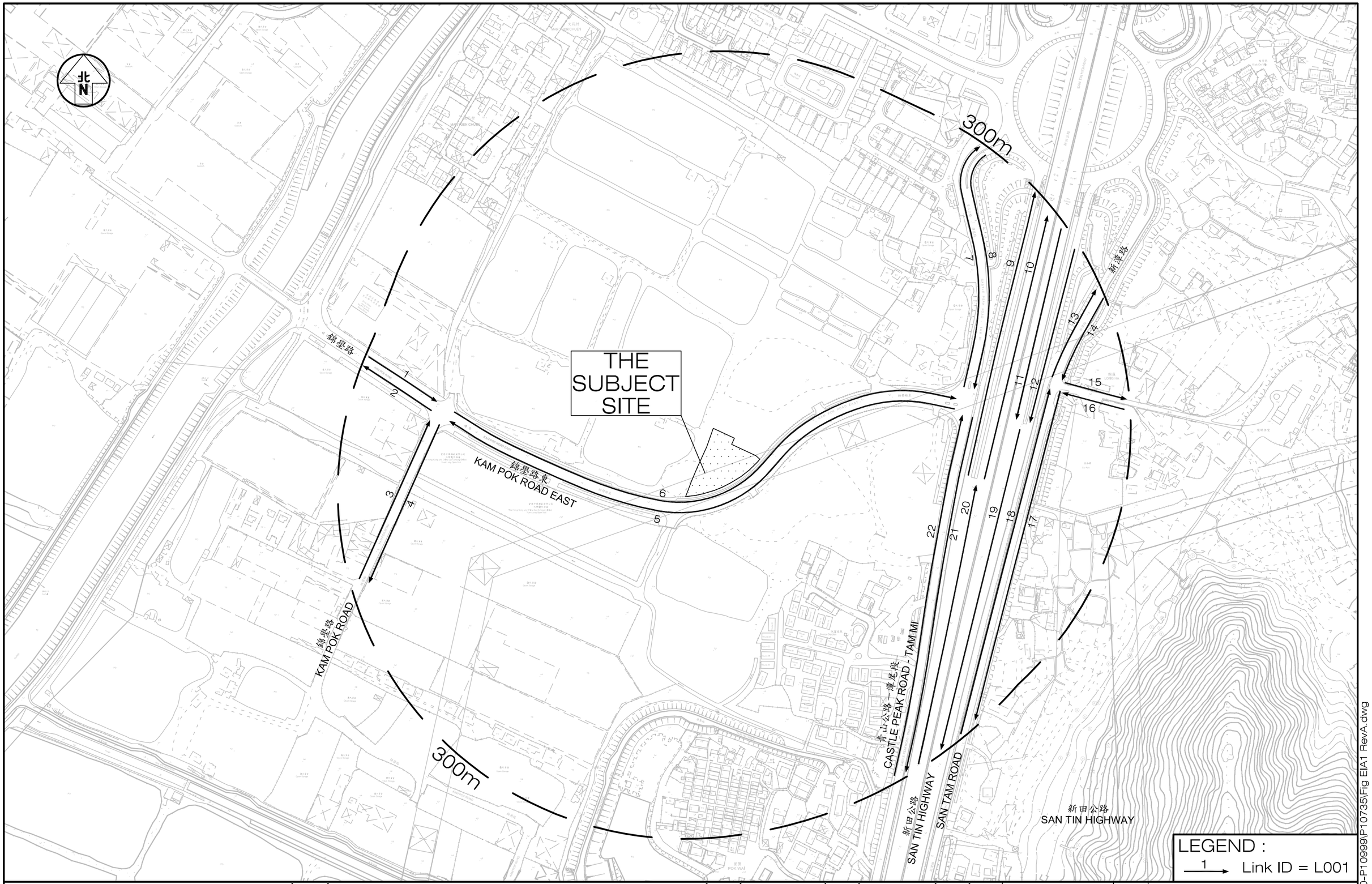
PROJECT : Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Various Lots in D.D. 104 and Adjoining Government Land, Nam Sang Wai, Yuen Long

DRAWING : SCHEMATIC SECTION

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

Drawing No. : CP-B201
Date: MAY 2025

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: 23 May 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	LD	80	43%	57%
L002	Kam Pok Road (WB)	Kam Pok Road East	Pok Wai South Road	50	LD	130	42%	58%
L003	Kam Pok Road (NB)	Pok Wai West Road	Kam Pok Road East	50	LD	80	18%	82%
L004	Kam Pok Road (SB)	Kam Pok Road East	Pok Wai West Road	50	LD	70	48%	52%
L005	Kam Pok Road East (WB)	Castle Peak Road - Tam Mi	Kam Pok Road	50	LD	170	43%	57%
L006	Kam Pok Road East (EB)	Kam Pok Road	Castle Peak Road - Tam Mi	50	LD	140	27%	73%
L007	Castle Peak Road - Tam Mi (NB)	Kam Pok Road East	Fairview Park Interchange	50	RR	460	49%	51%
L008	Castle Peak Road - Tam Mi (SB)	Fairview Park Interchange	Kam Pok Road East	50	RR	290	51%	49%
L009	San Tin Highway (NB)	San Tin Highway	Fairview Park Interchange	50	DD	820	72%	28%
L010	San Tin Highway (NB)	San Tin Highway	San Tin Highway	100	PD	3,940	68%	32%
L011	San Tin Highway (SB)	San Tin Highway	San Tin Highway	100	PD	3,610	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	340	62%	38%
L014	San Tam Road (SB)	Fairview Park Interchange	Unnamed Road	50	RR	700	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	700	68%	32%
L018	San Tam Road (NB)	Fung Kat Heung Road	Unnamed Road	50	RR	330	62%	38%
L019	San Tin Highway (SB)	San Tin Highway	Yuen Long Highway	100	PD	4,740	61%	39%
L020	San Tin Highway (NB)	Yuen Long Highway	San Tin Highway	100	PD	4,760	69%	31%
L021	Castle Peak Road - Tam Mi (SB)	Kam Pok Road East	Access Road to Merry Garden	50	RR	160	62%	38%
L022	Castle Peak Road - Tam Mi (NB)	Access Road to Merry Garden	Kam Pok Road East	50	RR	370	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: 23 May 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	LD	120	40%	60%
L002	Kam Pok Road (WB)	Kam Pok Road East	Pok Wai South Road	50	LD	100	39%	61%
L003	Kam Pok Road (NB)	Pok Wai West Road	Kam Pok Road East	50	LD	70	43%	57%
L004	Kam Pok Road (SB)	Kam Pok Road East	Pok Wai West Road	50	LD	70	20%	80%
L005	Kam Pok Road East (WB)	Castle Peak Road - Tam Mi	Kam Pok Road	50	LD	150	33%	67%
L006	Kam Pok Road East (EB)	Kam Pok Road	Castle Peak Road - Tam Mi	50	LD	170	42%	58%
L007	Castle Peak Road - Tam Mi (NB)	Kam Pok Road East	Fairview Park Interchange	50	RR	450	56%	44%
L008	Castle Peak Road - Tam Mi (SB)	Fairview Park Interchange	Kam Pok Road East	50	RR	270	51%	49%
L009	San Tin Highway (NB)	San Tin Highway	Fairview Park Interchange	50	DD	880	73%	27%
L010	San Tin Highway (NB)	San Tin Highway	San Tin Highway	100	PD	3,750	71%	29%
L011	San Tin Highway (SB)	San Tin Highway	San Tin Highway	100	PD	3,900	68%	32%
L012	San Tin Highway (SB)	Fairview Park Interchange	San Tin Highway	50	DD	680	76%	24%
L013	San Tam Road (NB)	Unnamed Road	Fairview Park Interchange	50	RR	330	67%	33%
L014	San Tam Road (SB)	Fairview Park Interchange	Unnamed Road	50	RR	700	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	700	66%	34%
L018	San Tam Road (NB)	Fung Kat Heung Road	Unnamed Road	50	RR	330	67%	33%
L019	San Tin Highway (SB)	San Tin Highway	Yuen Long Highway	100	PD	4,570	69%	31%
L020	San Tin Highway (NB)	Yuen Long Highway	San Tin Highway	100	PD	4,630	71%	29%
L021	Castle Peak Road - Tam Mi (SB)	Kam Pok Road East	Access Road to Merry Garden	50	RR	160	62%	38%
L022	Castle Peak Road - Tam Mi (NB)	Access Road to Merry Garden	Kam Pok Road East	50	RR	340	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_N02	Dining Area			70	**74**	Type 2	7	67	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	**72**	Type 2	7	65	Yes
	1F_N06	Communal Area			70	**74**	Type 2	7	67	Yes
	1F_N07	Communal Area			70	**75**	Type 2	7	68	Yes
	1F_N08	Communal Area			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_N11	Communal Area			70	**76**	Type 2	7	69	Yes
	2F_N12	Communal Area			70	**77**	Type 2	7	70	Yes
	2F_N13	Communal Area			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	


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:	823476.2
NSR y coord:	836539.7
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	171	-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 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

[redacted]

3 July 2025

[redacted]

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 [redacted]

Should you have any query on the matter, please contact the [redacted]

Yours sincerely,

(Ken NG)
For Director of Environmental Protection