Appendix 5

Environmental Assessment

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

ENVIRONMENTAL ASSESSMENT REPORT

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Report No.: RT23508-EA-01_v0

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Project:	PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES ENVIRONMENTAL ASSESSMENT REPORT
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1. INTRODUCTION

1.1. BACKGROUND

1.1.1. The Full Year Limited (the Project Proponent) proposes to develop a 23-storey composite tower (including 2 basement floors) comprising Residential Care Home for the Elderly (RCHE), flats, shop and services, office, clubhouse and carpark in Lot No. 3678 in D.D. 120, Yuen Long (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 located in Yuen Long Town Centre, with site area of approximately 780m^2. It is currently bounded by mid-rise residential buildings to the north, Yuen Long Pau Cheung Square to the east, Fook Tak Street to the south, and Fook Hong Street to the west. The Project Site is currently zoned as "Residential (Group A)" ("R(A)") under the Approved Yuen Long Outline Zoning Plan No. S/YL/27. **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 23-storey building (including 2 basement floors) comprising RCHE, flats, shop and services, office, clubhouse and carpark. 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	21 storeys and 2 basement floors
Total Gross Floor Area (GFA)	Approx. 9,453m^2
Building Height	Not more than +78.6 mPD
Proposed Floor Use	B2/F to B1/F: Carpark G/F: Shop and Services, Carpark Entrance and Lay-by 1/F to 2/F: Shop and Services 3/F to 7/F: Dormitory for RCHE 8/F to 9/F: Office and Back-of-House for RCHE 10/F to 19/F: Flats 20/F: Clubhouse

Population Size	202 (Based on an average household size of 2.8)
Tentative Population Intake Year	2027/2028
Proposed RCHE	
Total No. of Beds	Not more than 160 to 220
Proposed Flats	
Total No. of Flats	72

1.3.2. The construction works of the Proposed Development is targeted to commence in May 2024 and be completed by 2027.

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 Development:

- Air Quality Impact;
- Noise Impact;
- Water Quality Impact; and
- Waste Management.

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 presents the waste management implications; and
- Section 6 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 Development. 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	50	3
Respirable Suspended Particulates (PM_{10}) [ii]	24-hour	100	9
	Annual	50	N/A
Fine Suspended Particulates ($PM_{2.5}$) [iii]	24-hour	50	35
	Annual	25	N/A

Pollutant	Averaging Time	Concentration Limit [i] ($\mu g/m^3$)	Number of Exceedances Allowed
Nitrogen Dioxide (NO_2)	1-hour	200	18
	Annual	40	N/A
Ozone (O_3)	8-hour	160	9
Carbon Monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	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 active and passive recreational uses are also recommended. Evaluation of potential air quality impact on the Proposed Development due to the open road 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

Pollution Source	Parameter	Buffer Distance	Permitted 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. BASELINE CONDITION

Existing Ambient Air Quality

2.3.1. The nearest EPD General Air Quality Monitoring Station (AQMS) to the Project Site is the Yuen Long AQMS located at Yuen Long District Office Building, which is approximately 645m southwest to the Project Site. The concentrations of the key air pollutants relevant to the Project in recent five years (2018 – 2022) at Yuen Long AQMS are summarized in **Table 2.3**, which depicts the trend in ambient air quality.

Table 2.3 Air Quality Monitoring Data at Yuen Long General AQMS Station (Year 2018-2022)

Pollutant	Averaging Time	Concentration (μg/m³)					2014-2021 AQOs [1] (μg/m³)	Prevailing AQOs [2] (μg/m³)
		2018	2019	2020	2021	2022		
Nitrogen Dioxide (NO_2)	1-hour (19th highest)	150	161	135	148	122	200	200
	Annual	**43**	**44**	32	40	37	40	40
Respirable Suspended Particulates (PM_{10})	24-hour (10th highest)	75	83	77	73	56	100	100
	Annual	37	37	30	30	25	50	50
Fine Suspended Particulates ($PM_{2.5}$)	24-hour (10th highest)	46	45	36	43	41	75	N/A
	24-hour (36th highest)	34	34	28	31	30	N/A	50
	Annual	20	20	16	17	16	35	25
Sulphur Dioxide (SO_2)	10-minute (4th highest)	52	42	26	24	21	500	500
	24-hour (4th highest)	16	11	10	14	7	125	50
Ozone (O_3)	8-hour (10th highest)	**162**	**200**	154	**178**	**194**	160	160
Carbon Monoxide (CO)	1-hour (1st highest)	1,720	2,150	1,530	2,090	1,700	30,000	30,000
	8-hour (1st highest)	1,574	1,903	1,279	1,591	1,519	10,000	10,000

Notes:

[1] AQOs that were effective from 2014 to 2021.

[2] Prevailing AQOs implemented on 1 January 2022.

[3] Underlined and bolded figures indicate exceedance recorded.

2.3.2. As shown in **Table 2.3**, the monitored air pollutant concentrations from 2018 to 2022

could comply with the prevailing AQOs except for the annual NO_2 concentrations in 2018 and 2019, and the 8-hour average O_3 concentrations in 2018 to 2019 and 2021 to 2022.

Predicted Background Air Quality

2.3.3. Apart from the air quality monitoring data, EPD also provides a set of regional background concentrations for key pollutants in the "Pollutants in the Atmosphere and their Transport over Hong Kong" (PATH) model v3.0. Given that the tentative intake year of the Proposed Development would be in Year 2027 the earliest, the background air quality predicted by PATH v3.0 for Year 2025 will be presented as the future background air quality during the operation phase as a worst-case scenario.

2.3.4. As shown in **Figure 2.1**, the 500m assessment area for this Project is covered by the PATH grids (25,46), (25,47), (26,46) and (26,47). The predicted Year 2025 background concentrations at these grids are summarized in **Table 2.4** and compared against the prevailing AQOs. The predicted background concentrations in Year 2025 are lower than their respective AQOs except for the 8-hour average O_3 concentrations.

Table 2.4 Background Air Pollutant Concentrations Predicted by PATH v3.0 Model in Year 2025

Pollutant	Averaging Time	Concentration (µg/m³)				Prevailing AQOs (µg/m³)
		PATH Grid (25,46)	PATH Grid (25,47)	PATH Grid (26,46)	PATH Grid (26,47)	
Nitrogen Dioxide (NO_2)	1-hour (19th highest)	110	115	111	116	200
	Annual	21	23	19	21	40
Respirable Suspended Particulates (PM_{10})	24-hour (10th highest)	68	68	69	68	100
	Annual	28	28	28	28	50
Fine Suspended Particulates ($PM_{2.5}$)	24-hour (36th highest)	26	25	27	26	50
	Annual	16	16	16	16	25
Sulphur Dioxide (SO_2)	10-minute (4th highest)	53	53	70	52	500
	24-hour (4th highest)	12	12	12	12	50
Ozone (O_3)	8-hour (10th highest)	**213**	**212**	**213**	**214**	160
Carbon Monoxide (CO)	1-hour (1st highest)	946	949	941	951	30,000
	8-hour (1st highest)	852	858	847	856	10,000

2.4. AIR SENSITIVE RECEIVERS

2.4.1. 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 2.5** below and their locations are shown in **Figure 2.1**.

Table 2.5 Representative Air Sensitive Receivers

ASR ID	Description	Use	Existing/ Planned	Approximate Shortest Distance from Project Site, m
A01	Man Tat Building	Residential	Existing	< 5
A02	Fook Loi Building	Residential	Existing	< 5
A03	On Wing Building	Residential	Existing	< 5
A04	Shun Hing Building	Residential	Existing	19
A05	Pau Cheung Square Playground	Recreational	Existing	26
A06	14 Yuen Long Pau Cheung Square	Residential	Existing	9
A07	24 Fook Hong Street	Residential	Existing	8
A08	18 Fook Tak Street	Residential	Existing	10
A09	Hung Wan Building	Residential	Existing	12

2.5. CONSTRUCTION PHASE IMPACT REVIEW

Impact Identification and Evaluation

2.5.1. The potential sources of air quality impact during construction phase would be fugitive dust generated from various construction activities and gaseous emissions from construction machinery. The construction of the Proposed Development shall comply with the guidelines listed below:

- Construction dust shall be controlled in accordance with the requirements of the Air Pollution Control (Construction Dust) Regulation (Cap. 311R). Also, notification of notifiable works as stipulated in the Regulation shall be submitted to Environmental Protection Department (EPD) by the Contractor before the

proposed work is to be commenced;

- Dark smoke emission from the machines used for construction shall comply with the requirements of the Air Pollution Control (Smoke) Regulations (Cap. 311C);
- All of the Non-road Mobile Machinery (NRMMs) used for construction shall comply with the prescribed emission standard as stipulated in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (Cap. 311Z); and
- Liquid fuel with a sulphur content not exceeding 0.005% by weight and a viscosity not more than 6 centistokes at 40°C, such as ultra-low sulphur diesel (ULSD), should be used as fuel as stipulated in the Air Pollution Control (Fuel Restriction) Regulations (Cap. 311I).

2.5.2. According to the information on the Drainage Services Department's (DSD's) website, Contract No. DC/2022/03 "Yuen Long Barrage and Nullah Improvement Schemes" commenced in May 2023 and is anticipated to be completed by mid-2030, which would overlap with the construction of the Proposed Development. Location of this concurrent project is presented in **Figure 2.2**. This concurrent project is approximately 285m from the Project Site, with mid-rise residential buildings and office buildings in between. Considered that the construction works of this concurrent project is relatively minor in scale (i.e. construction of a sewage pumping station and sewerage improvement works) and the large separation distance between the two sites, the fugitive dust impact from this concurrent project would be minimal during the concurrent period. In addition, an environmental monitoring and audit (EM&A) programme will be implemented for this concurrent project during its construction phase to check the effectiveness of the recommended dust control measures and compliance with the relevant statutory criteria. With the mitigation measures and good site practices in place, adverse cumulative impact on air quality is not expected.

2.5.3. Based on the latest information on the Highways Department's (HyD's) website, the Proposed Development may overlap with the Construction of Elevated Pedestrian Corridor in Yuen Long Town connecting with Long Ping Station. Location of this potential concurrent project is presented in **Figure 2.2**. This project is currently under planning/design and there is no anticipated construction commencement date. In view of the construction works of this potential concurrent project is relatively minor in scale (i.e. construction of a footbridge, drainage improvement works and landscaping works) and the large separation distance (i.e. approximately 310m from the Project Site), the fugitive dust impact from this potential concurrent project would be minimal during the concurrent period. In addition, an environmental monitoring and audit (EM&A) programme will be implemented for this potential concurrent project during its construction phase to check the effectiveness of the recommended dust control

measures and compliance with the relevant statutory criteria. With the mitigation measures and good site practices in place, adverse cumulative impact on air quality is not expected.

Recommended Mitigation Measures

2.5.4. To ensure that dust and gaseous emissions are minimized during the construction phase of the Project, relevant dust 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 dust suppression 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.

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

2.6. OPERATION PHASE IMPACT REVIEW

Impact Identification and Evaluation

Vehicular Emission

2.6.1. Vehicular emission from existing open roads is the potential air pollution source to the

Proposed Development during operation phase.

2.6.2. 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 Yuen Long On Ning Road, Fook Tak Street and Yuen Long Pau Cheung Square. The required buffer distances from the surrounding roads are summarized in **Table 2.6** and illustrated in **Figure 2.3**. No air sensitive uses, including openable windows, fresh air intake of mechanical ventilation and recreational uses in the open area, would be located within the buffer zones.

Table 2.6 Relevant Buffer Distance Requirements

Road Name	Road Type	Recommended Buffer Distance in HKPSG	Buffer Distance allowed for the Proposed Development
Yuen Long On Ning Road	District Distributor [1]	10m	>10m
Fook Tak Street	Local Distributor [2]	5m	>5m
Yuen Long Pau Cheung Square	Local Distributor [2]	5m	>5m

Notes:

[1] Reference from the Annual Traffic Census 2022 published by the Transport Department.

[2] No assigned road type in the Annual Traffic Census 2022. For good air quality planning, they are assumed as Local Distributor.

2.6.3. 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 Development is anticipated.

Chimney Emission

2.6.4. Based on desktop study and verification by site survey, no chimney is identified within 200m area from the Project boundary. Therefore, no adverse air quality impact arising from chimney emission on the Proposed Development is anticipated.

Emission from the Proposed Carpark

2.6.5. There will be an underground carpark on the B2/F and B1/F of the Proposed Development. The proposed carpark will be designed in accordance with EPD's Practice Note for Professional Persons ProPECC PN 2/96 "Control of Air Pollution in Car Parks" so as to ensure the exhaust air discharged to the atmosphere from the carpark would not cause excessive impact to neighbouring air sensitive uses. The exhaust outlets of the carpark will be located away from the nearby ASRs as far as practicable. Therefore, no adverse air quality impact arising from the proposed carpark

on the nearby ASRs is anticipated.

Emission from the Kitchen within the Proposed Development

2.6.6. There will be a kitchen on 8/F of the Proposed Development. The exhaust outlets of the kitchen will be located away from the nearby ASRs as far as practicable. Oily fume and cooking odour emissions from cooking processes are controlled under the APCO. The best practical control measures recommended in EPD's Guideline "Control of Oily Fume and Cooking Odour from Restaurants and Food Business" will be adopted to minimize the gaseous and odour emissions from kitchen operation. In view of the above, no adverse air quality impact associated with kitchen operation is anticipated.

Recommended Mitigation Measures

2.6.7. The following mitigation measures are recommended for kitchen operation during the operation phase of the Proposed Development:

- Exhaust outlets of the kitchen should be located away from any nearby ASRs as far as practicable;
- Air pollution control equipment (e.g. electrostatic precipitators, air washers, scrubbers, etc.) should be installed at the exhaust system serving the cooking stoves or other cooking appliances, where appropriate; and
- Regular maintenance of the exhaust system and air pollution control equipment.

2.7. CONCLUSION

Construction Phase

2.7.1. Fugitive dust emission is the major source of air pollution during the construction phase of the Project. Through proper implementation of dust 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 at source to acceptable levels. Therefore, air quality impact during construction phase is anticipated to be insignificant.

Operation Phase

2.7.2. The potential operation phase air quality impact due to vehicular emission from the surrounding roads and industrial chimney emission have been evaluated. Since the HKPSG buffer distance requirements could be complied and there is no chimney identified within 200m area from the Project boundary, no adverse operation phase air quality impact on the Proposed Development is expected.

2.7.3. The potential air quality impact associated with the operation of the carpark and kitchen within the Proposed Development have also been reviewed. The proposed carpark will

be designed in accordance with ProPECC PN 2/96 and its exhaust outlets will be located away from the nearby ASRs as far as practicable. As for the kitchen, the exhaust outlets will also be located away from the nearby ASRs as far as practicable and the recommended mitigation measures stated in the EPD's Guideline "Control of Oily Fume and Cooking Odour from Restaurants and Food Business" will be followed for the design of exhaust system. As such, no adverse air quality impact arising from the operation of the proposed carpark and kitchen is envisaged.

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 demolition, site formation, foundation and superstructure. During the operation phase of the Project, noise impact due to road traffic and fixed noise sources have been assessed.

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";
- Good Practices on Pumping System Noise Control; and
- Good Practices on Ventilation System Noise Control.

Construction Phase

Noise Standards for Construction Works during Non-restricted Hours

3.2.2. There is no statutory control for noise arising from construction activities (except for percussive piling and the use of hand-held percussive breakers and air compressors) during non-restricted hours (i.e. 0700 to 1900 hours from Monday to Saturday, not including general holidays). However, ProPECC PN 1/24 provides the assessment criteria for construction works during non-restricted hours. The recommended daytime construction noise levels for uses rely on openable windows for ventilation are 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

3.2.3. 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.

3.2.4. 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.

3.2.5. According to the latest Noise Control Designated Area Plan (Plan No. EPD/AN/NT-01), the Project Site falls within the Designated Area (DA). The construction works should comply with the requirements stipulated in the GW-TM and DA-TM.

Noise Standards for Percussive Piling

3.2.6. 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.

3.2.7. No percussive piling is anticipated for the Project. Notwithstanding, should percussive piling be required, the requirements in the PP-TM shall be followed.

Operation Phase

Noise Standards for Road Traffic Noise Impact Assessment

3.2.8. 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 3.2** summarizes the adopted road traffic noise criteria for noise sensitive uses with openable windows at the Proposed Development.

Table 3.2 Road Traffic Noise Criteria for Noise Sensitive Uses

Location	Use	$L_{10\ (1\ hour)}$, dB(A)
3/F – 7/F	Dormitory for RCHE	70
3/F	Nursing Station & Medical Consultation Room [2]	70
3/F	Rehabilitation Room & Store [2]	70
9/F	Staff Common Room / Rest Room	70
9/F	Office	70
9/F	Conference Room	70
9/F	Reception	70
10/F – 19/F	Residential Units	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] As confirmed by the Project Team, no medical operation and/or diagnostic activities will be carried out in the concerned rooms. Therefore, the noise planning standard of 70 dB(A) for offices as stipulated in Table 4.1 of Chapter 9 of the HKPSG has been selected.

[3] As confirmed by the Project Team, fixed glazing with mechanical ventilation will be provided for the Clubhouse on 20/F of the Proposed Development. As such, the Clubhouse is not considered as noise sensitive uses and excluded from the assessment.

Noise Standards for Fixed Noise Impact Assessment

3.2.9. 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 3.3**). 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 3.3 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

3.2.10. 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 3.4**.

Table 3.4 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

3.2.11. The Project Site is located in an area contains mainly residential and village type developments, with some Government, Institution or Community (G/IC) uses, industrial buildings and open spaces in the vicinity. In view of this, the type of area where the existing and future NSRs are located is classified as “area other than those above”. According to the Annual Traffic Census 2022 published by the Transport Department, Long Yip Street and Yuen Long On Lok Road are classified as Primary Distributors with an annual average daily traffic (AADT) in excess of 30,000. Hence, Long Yip Street and Yuen Long On Lok Road are considered as major roads under the IND-TM and thereby an influencing factor. As the planned NSRs within the Proposed Development will be surrounded by mid-rise residential buildings, they will not be affected by these two major roads. As such, Area Sensitivity Rating of “B” has been assigned for the

NSRs.

3.2.12. Though the details of the fixed plant to be installed within the Proposed Development are not available at this stage, as a rule of thumb for future detail design, any noise emission from planned fixed plant noise sources within the Proposed Development should be designed to meet the relevant noise criteria as stipulated in Chapter 9 of the HKPSG, which are detailed in Section 3.2.10 above.

3.3. BASELINE CONDITION

3.3.1. The existing noise conditions at the Project Site is mainly contributed by road traffic noise from the nearby roads. Road traffic along Long Yip Street and Yuen Long On Lok Road as Primary Distributors are considered to be the major sources of background noise to that area.

3.4. NOISE SENSITIVE RECEIVERS

3.4.1. 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	Man Tat Building	Residential	Existing	<5
N02	Fook Loi Building	Residential	Existing	<5
N03	On Wing Building	Residential	Existing	<5
N04	Shun Hing Building	Residential	Existing	19
N05	14 Yuen Long Pau Cheung Square	Residential	Existing	9
N06	24 Fook Hong Street	Residential	Existing	8
N07	18 Fook Tak Street	Residential	Existing	10
N08	Hung Wan Building	Residential	Existing	12

3.5. CONSTRUCTION PHASE IMPACT REVIEW

Impact Identification and Evaluation

3.5.1. 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.

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

3.5.3. As the Project Site is flat, minimal site formation works would be required. The construction activities would be constructed section by section and temporary in nature such that the construction noise arising from the use of PME would be in short-term only. On top of that, it is anticipated that less than 20 number of construction plant would be in operation during each construction activity due to the limited space for construction works. With the implementation of the recommended mitigation measures, the construction noise impact on the nearby NSRs would be minimized.

Recommended Mitigation Measures

3.5.4. 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.

3.5.5. 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.

3.6. OPERATION PHASE IMPACT REVIEW

Road Traffic Noise

Impact Identification

3.6.1. The Project Site is bounded by Yuen Long On Ning Road to the north, Yuen Long Pau Cheung Square to the east, and Fook Tak Street to the southwest. The key noise impact during operation phase would be road traffic noise from the abovementioned roads and other local roads.

Noise Sensitive Uses

3.6.2. 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 3.2**. The locations of all NSRs for road traffic noise impact assessment are shown in **Figures 3.2a** to **3.2e**.

Assessment Methodology

3.6.3. The Road Noise Module 2.7.2 of NoiseMap Enterprise Edition has been used to assess the road traffic noise impact from the existing and planned road network 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 NoiseMap model in predicting the potential traffic noise impacts.

3.6.4. 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 2042, which corresponds to the maximum projected traffic conditions within 15 years upon occupancy of the Proposed Development, i.e. Year 2027. 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

3.6.5. 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	NSR ID	Facility / Room	Noise Criteria, dB(A)	Predicted Maximum $L_{10\ (1\ hour)}$, dB(A)
3/F – 7/F	3F_N01 to 3F_N11 4F_N01 to 4F_N16 5F_N01 to 5F_N16 6F_N01 to 6F_N16 7F_N01 to 7F_N16	Dormitory for RCHE	70	67
3/F	3F_N12	Nursing Station & Medical Consultation Room	70	61
3/F	3F_N13 to 3F_N16	Rehabilitation Room & Store	70	65
9/F	9F_N01 to 9F_N03	Staff Common Room / Rest Room	70	65
9/F	9F_N04 to 9F_N09	Office	70	65
9/F	9F_N10 to 9F_N12	Conference Room	70	64
9/F	9F_N13	Reception	70	64

Floor	NSR ID	Facility / Room	Noise Criteria, dB(A)	Predicted Maximum $L_{10\ (1\ hour)}$, dB(A)
10/F – 19/F	10F-17F_A1 10F-17F_B1-B5 10F-17F_C1-C3 10F-17F_D1-D2 10F-17F_E1-E2 10F-17F_F1-F2 10F-17F_G1-G5 10F-17F_H1-H2 18F-19F_A1-A4 18F-19F_B1-B4 18F-19F_C1-C2 18F-19F_D1-D6	Residential Units	70	66

3.6.6. The assessment results revealed that all NSRs within the Proposed Development could comply with the respective noise criteria under the base case 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 on the Proposed Development

Identification of Fixed Noise Sources

3.6.7. A number of existing fixed noise sources have been identified within 300m assessment area through desktop study and site visit conducted on 11 December 2023. **Figure 3.3** indicates the locations of existing major fixed noise sources with details summarized in **Table 3.7**.

Table 3.7 Information of the Identified Fixed Noise Sources

Location	Source ID	Equipment	Approximate Shortest Horizontal Distance to the Project Site
On Lok Road Substation	S01 – S05	Transformers	240m
Hang Seng Yuen Long Building	S06 – S07	Air-cooled Chillers	103m
Yuen Long Trade Centre	S08 – S11	Air-cooled Chillers	96m
Yuen Long Government Offices	S12 – S13	VRV	180m
BOC Yuen Long Commercial Centre	S14	VRV	154m

3.6.8. In view of the large separation distance between the identified major fixed noise

sources and the Project Site (i.e. approximately 100m or above) and no noticeable fixed noise was observed at the Project Site during site visit, no adverse fixed noise impact to the Proposed Development is expected.

Fixed Noise Impact from the Proposed Development

Impact Identification and Evaluation

3.6.9. According to the latest development scheme, potential fixed noise sources within the Proposed Development include the transformer room, lift machine room, pump rooms, E&M rooms, and ventilation systems of the kitchen and carpark.

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

3.6.11. 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 Development will not exceed the relevant noise criteria under the HKPSG and NCO.

Recommended Mitigation Measures

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

- Select quieter plant / equipment during procurement; 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.

3.7. CONCLUSION

Construction Phase

3.7.1. Evaluation on construction noise impact associated with the use of PME for 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

Road Traffic Noise

3.7.2. Operational road traffic noise impact on the planned noise sensitive uses within the Proposed Development has been assessed. The assessment results revealed that all noise sensitive uses within the Proposed Development could comply with the respective noise criteria under the base case scenario. No adverse road traffic noise impact is envisaged.

Fixed Noise

3.7.3. A number of existing fixed noise sources have been identified within 300m assessment area. In view of the large separation distance between the identified fixed noise sources and the Project Site and no noticeable fixed noise was observed at the Project Site, no adverse fixed noise impact to the Proposed Development is expected.

3.7.4. To ensure the fixed plant noise generated by the Proposed Development would not cause excessive impact to neighbouring noise sensitive uses, potential fixed noise sources within the Proposed Development 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, it is anticipated that the fixed plant noise impact on the surrounding NSRs due to the operation of the Proposed Development will not exceed the relevant noise criteria under the HKPSG and NCO.

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.

4.2.3. As Deep Bay is an ecological sensitive area, a "zero discharge policy" for Deep Bay has been implemented in Deep Bay catchment. Effluents discharged directly or ultimately into Deep Bay are required to be properly treated prior to final disposal such that there would be no net increase in pollution load to Deep Bay.

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	Yuen Long Town Nullah

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 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.

4.6. CONCLUSION

Construction Phase

4.6.1. During construction, water quality impacts can be properly controlled with the implementation of good site practices, provision of sufficient chemical toilets on-site with regular maintenance, and proper handling and disposal of waste materials. Provided these measures are properly implemented, it is unlikely that any adverse water quality impact will be induced during the construction of the Proposed Development.

Operation Phase

4.6.2. 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. With implementation of stormwater best management practices including provision of trapped gullies and catchpits, adverse impact to the water quality is not anticipated.

4.6.3. Effluent discharge from the kitchen within the Proposed Development is governed by the WPCO. Grease traps shall be installed to separate greasy materials from wastewater prior to discharge. Provided that the grease traps are properly designed, constructed and maintained, no adverse water quality impact is anticipated due to the operation of the kitchen.

4.6.4. Sewage generated from the Proposed Development would be collected and conveyed to the nearest public sewerage system via proper connections. No sewage will be released to the environment without treatment.

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);
- Dumping at Sea Ordinance (Cap. 466);
- 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 and non-inert C&D materials. Where practicable, inert C&D material reused on-site shall be encouraged to minimize material volumes requiring off-site transport/ disposal. Disposal outlets such as public fill reception facilities shall be identified for inert materials if no on-site reuse opportunities exist. Non-inert C&D materials should be reused or recycled as far as possible. Landfill disposal should be considered as the last resort for waste handling.

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. Materials classified as chemical waste will require special handling and storage arrangement before removal for appropriate treatment at the Chemical Waste Treatment Centre (CWTC) or other licensed facilities. Wherever possible opportunities should be taken to reuse and recycle materials.

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. 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. 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. 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 as far as practicable. 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.

5.6. CONCLUSION

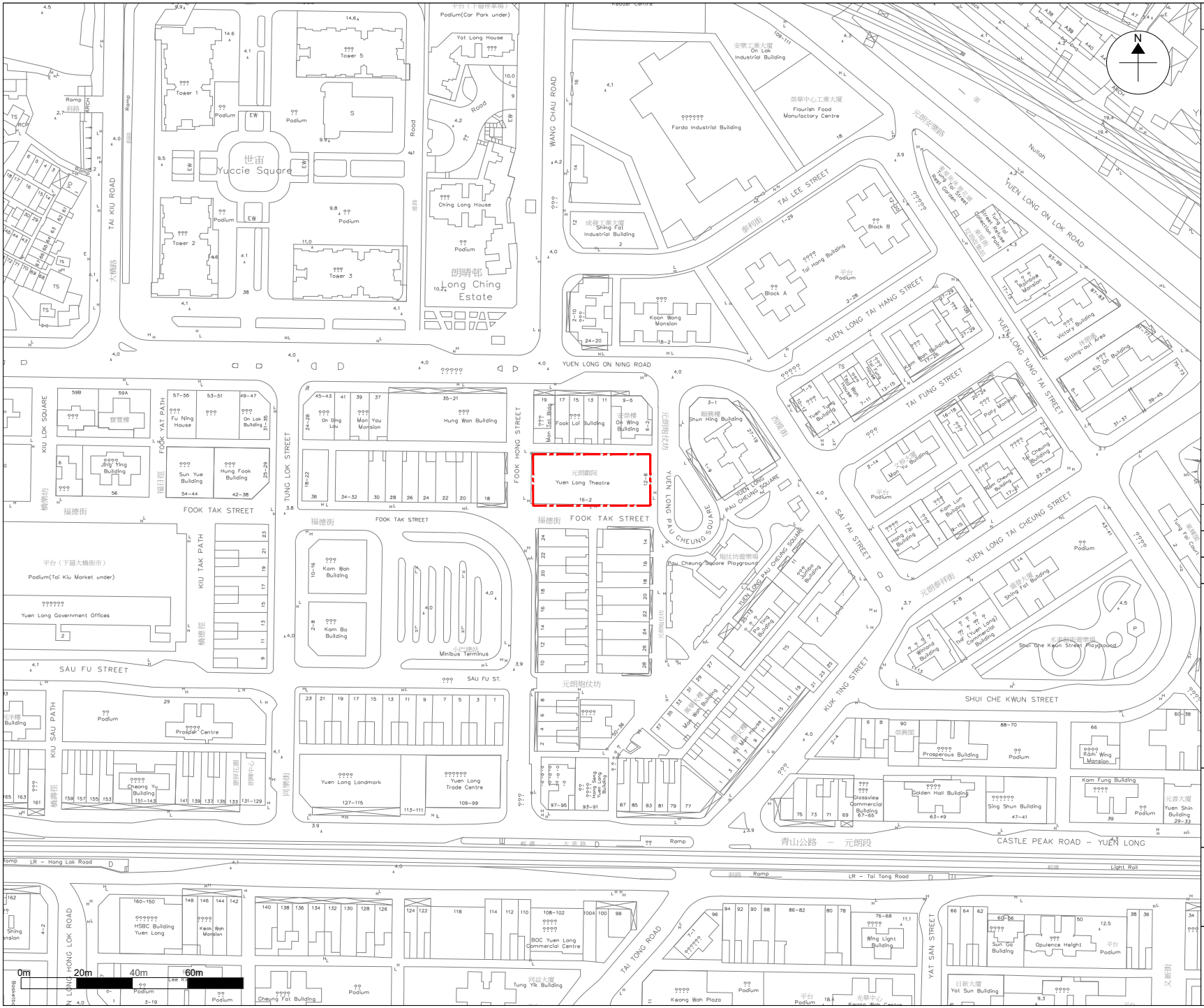
5.6.1. The potential impacts of wastes arising from construction and operation of the Proposed Development have been assessed. With the recommended procedures/ measures in place, the wastes generated/ disposed of during the construction and operation phases should not be result in any adverse environmental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

6. CONCLUSION

6.1.1. The Project is to construct a 23-storey composite tower comprising RCHE, flats, shop and services, office, clubhouse and carpark in Lot No. 3678 in D.D. 120, Yuen Long. This EA Report addressed the potential environmental issues arising from the construction and operation of the Proposed Development, which include the air quality, noise, water quality and waste management.

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

FIGURE 1.1
LOCATION OF PROJECT SITE



Copyright by BeeXergy Consulting Limited

LEGEND:

Project Site

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240226	20240226	20240226

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

Figure Title

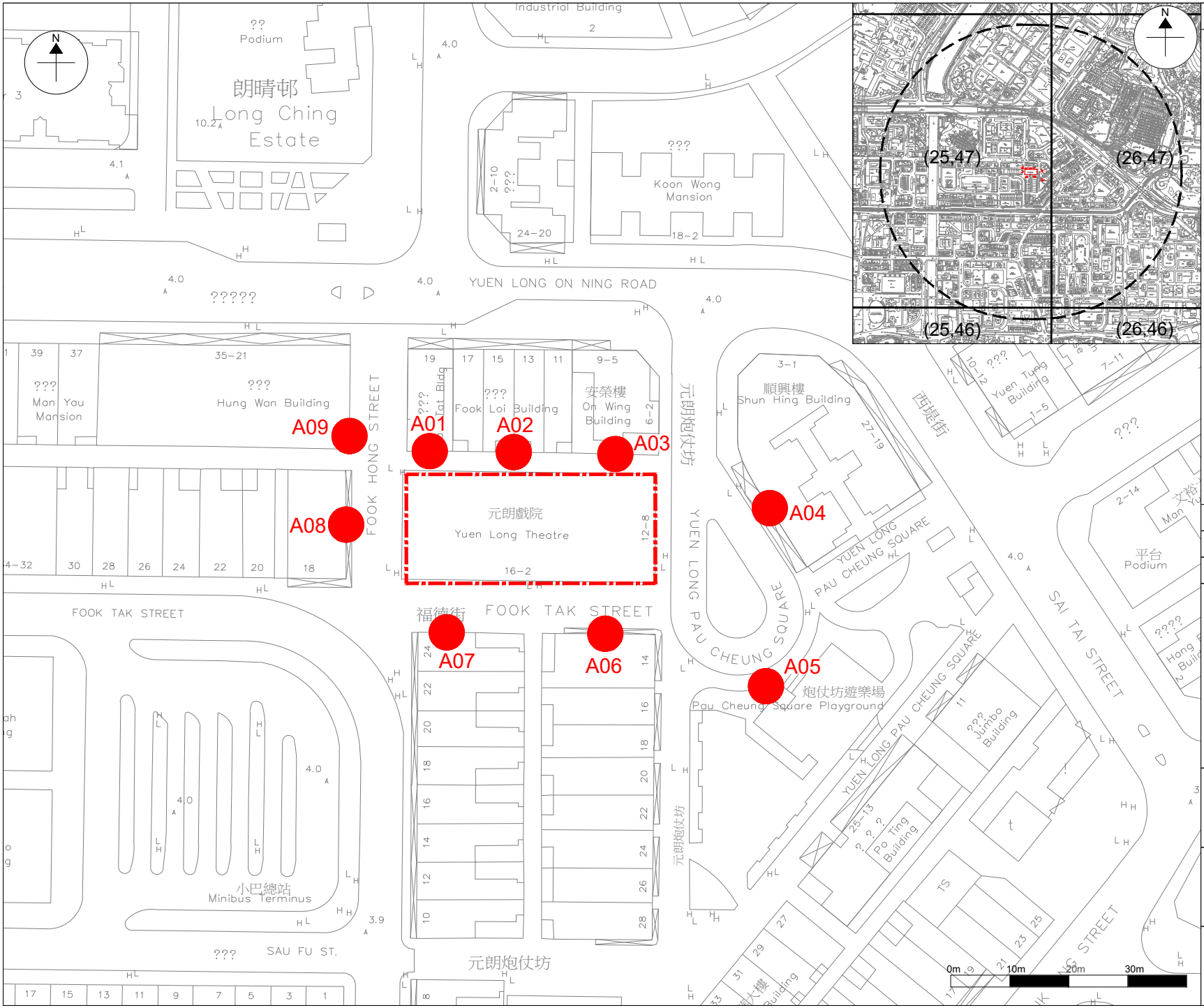
Location of Project Site

Figure No.	**Rev.**
Figure 1.1	0

BeeXergy Consulting Limited

\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 1.1 Site Location.dwg

FIGURE 2.1
LOCATION OF REPRESENTATIVE AIR SENSITIVE RECEIVERS



LEGEND:

- Project Site
- 500m Assessment Area for Air Quality
- Representative Air Sensitive Receivers
- (xx,xx) PATH Grid

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240226	20240226	20240226

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

Figure Title

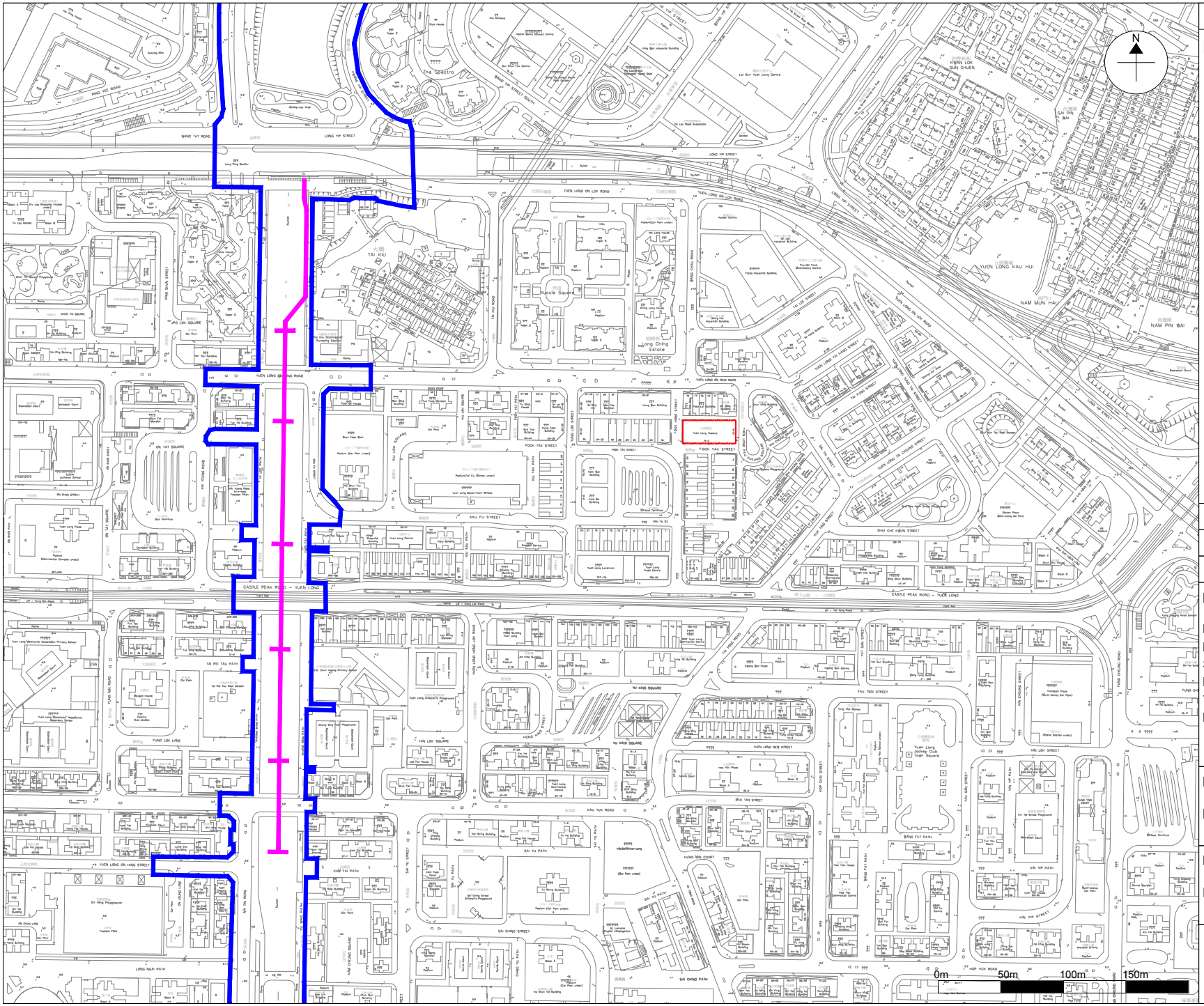
Location of Representative Air Sensitive Receivers

Figure No.	**Rev.**
Figure 2.1	0

BeeXergy Consulting Limited

\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 2.1 ASRs.dwg

FIGURE 2.2
LOCATION OF CONCURRENT PROJECTS



LEGEND:

- Project Site
- Project Site of Contract No. DC/2022/03 "Yuen Long Barrage and Nullah Improvement Schemes"
- Project Site of Construction of Elevated Pedestrian Corridor in Yuen Long Town connecting with Long Ping Station

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240122	20240122	20240122

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

Figure Title

Location of Concurrent Projects

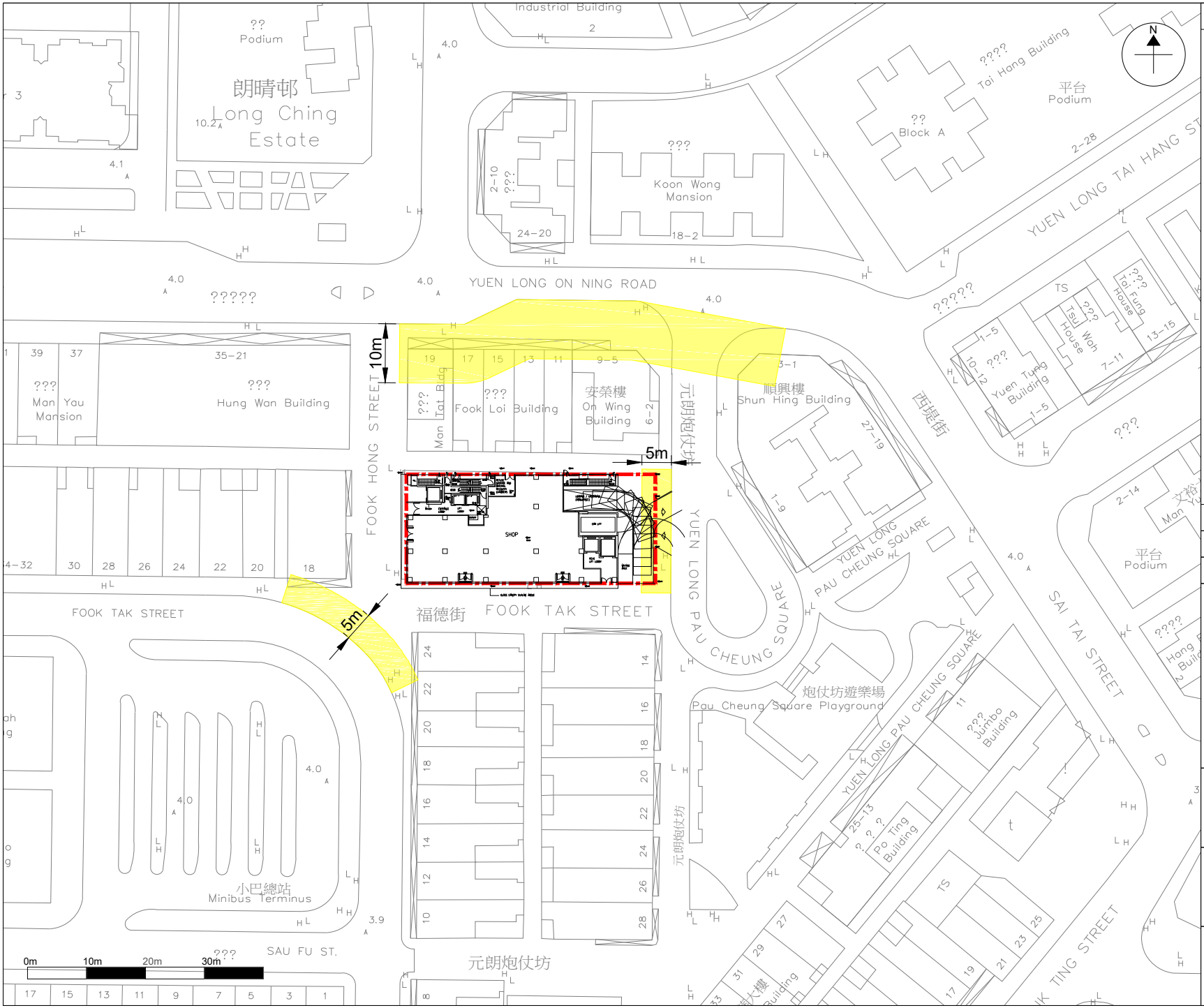
Figure No.	**Rev.**
Figure 2.2	0

BeeXergy Consulting Limited

\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 2.2 Concurrent Projects.dwg

FIGURE 2.3

BUFFER DISTANCE BETWEEN THE PROPOSED DEVELOPMENT AND THE NEARBY ROAD NETWORK



LEGEND:

- Project Site
- Required Buffer Distance

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240226	20240226	20240226

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

Figure Title

Buffer Distance between the Proposed Development and the Nearby Road Network

Figure No.	Rev.
Figure 2.3	0

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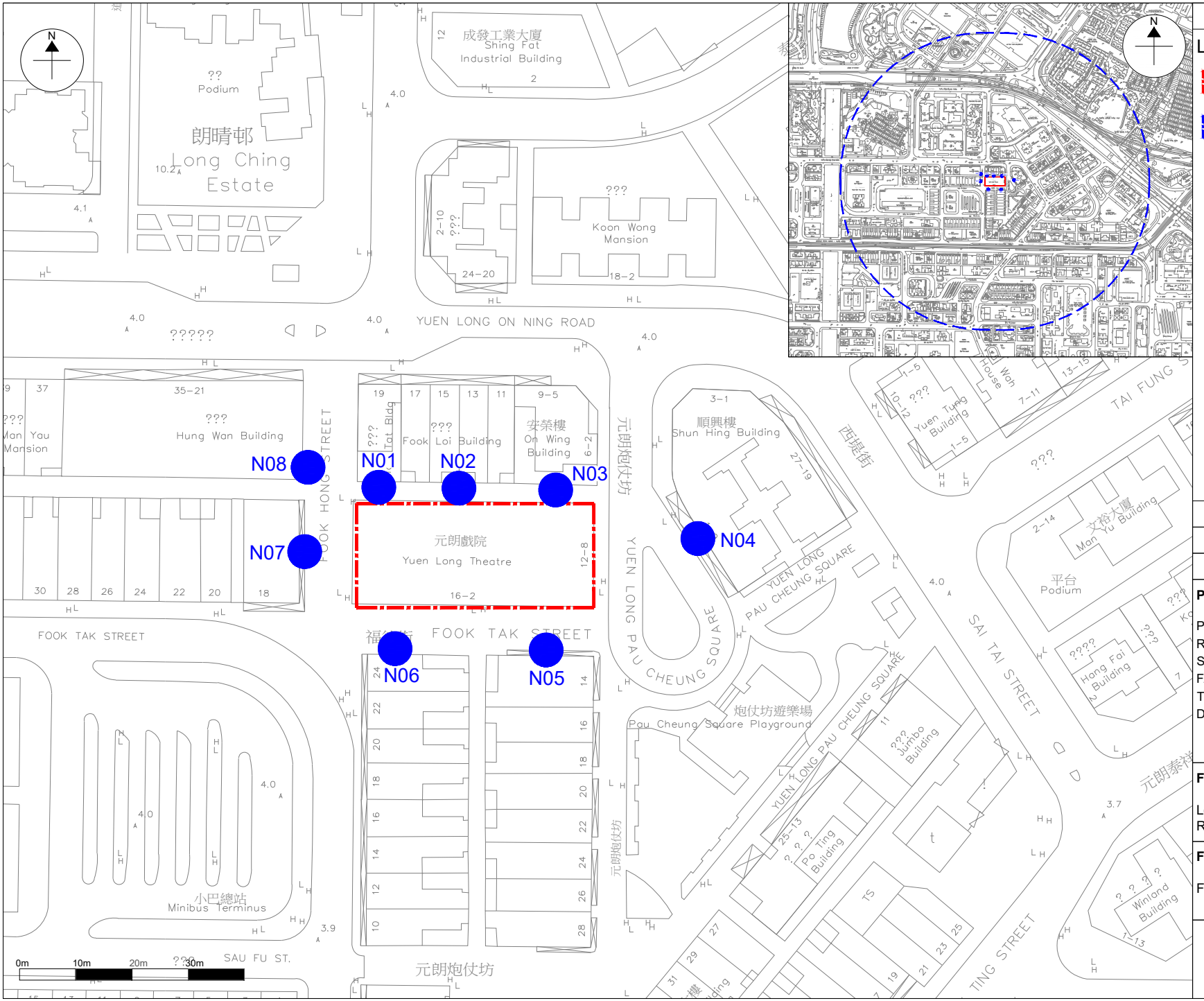
\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 2.3 Buffer Distances.dwg

FIGURE 3.1
LOCATION OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS



LEGEND:

- Project Site
- 300m Assessment Area for Noise
- Representative Noise Sensitive Receiver

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240122	20240122	20240122

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

Figure Title

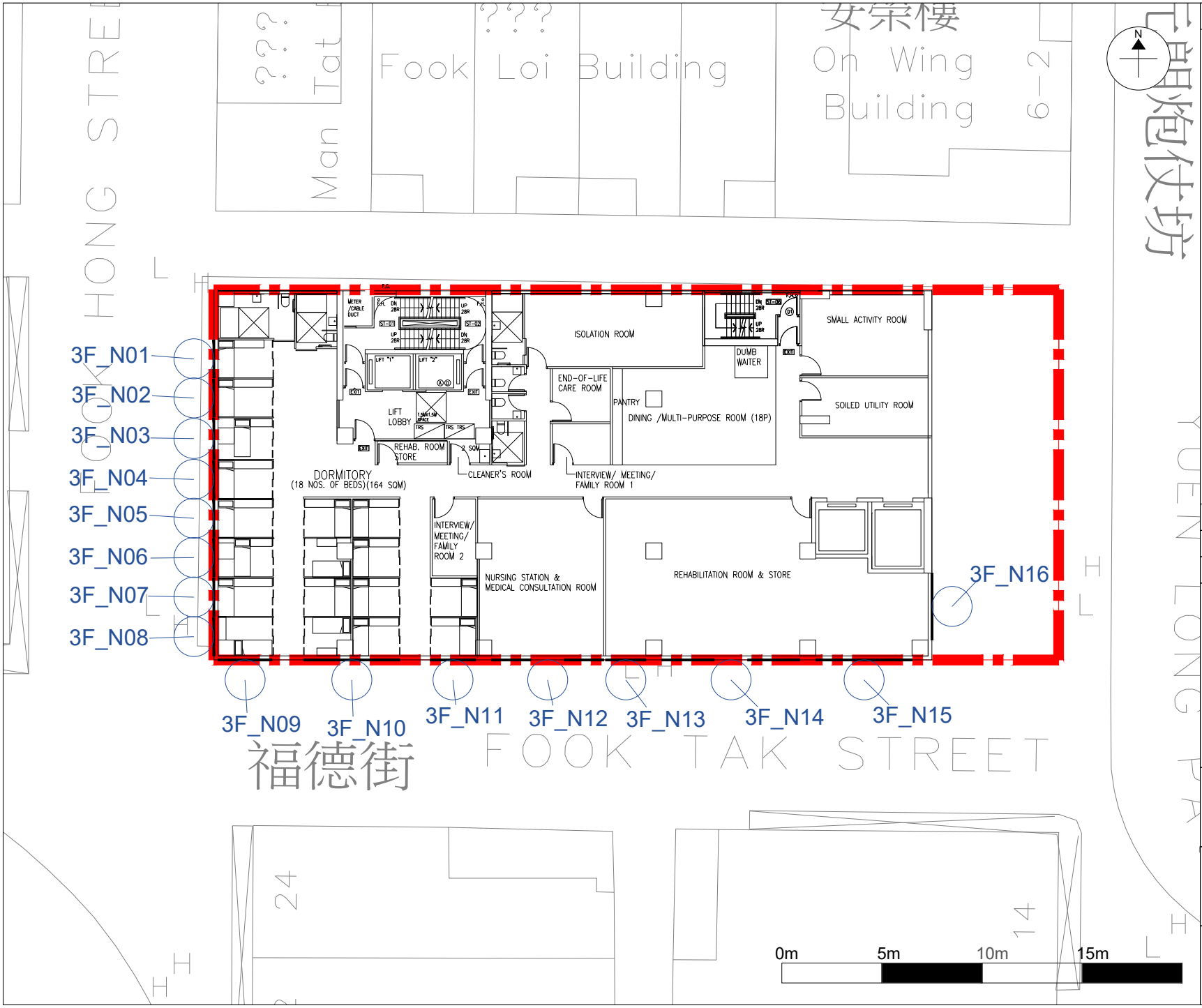
Location of Representative Noise Sensitive Receivers

Figure No.	Rev.
Figure 3.1	0

BeeXergy Consulting Limited

\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 3.1 NSRs.dwg

FIGURE 3.2A – 3.2E
LOCATION OF NOISE SENSITIVE RECEIVERS FOR ROAD TRAFFIC NOISE ASSESSMENT



LEGEND:

- Project Site
- NSR_ID — Noise Sensitive Receiver

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240226	20240226	20240226

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

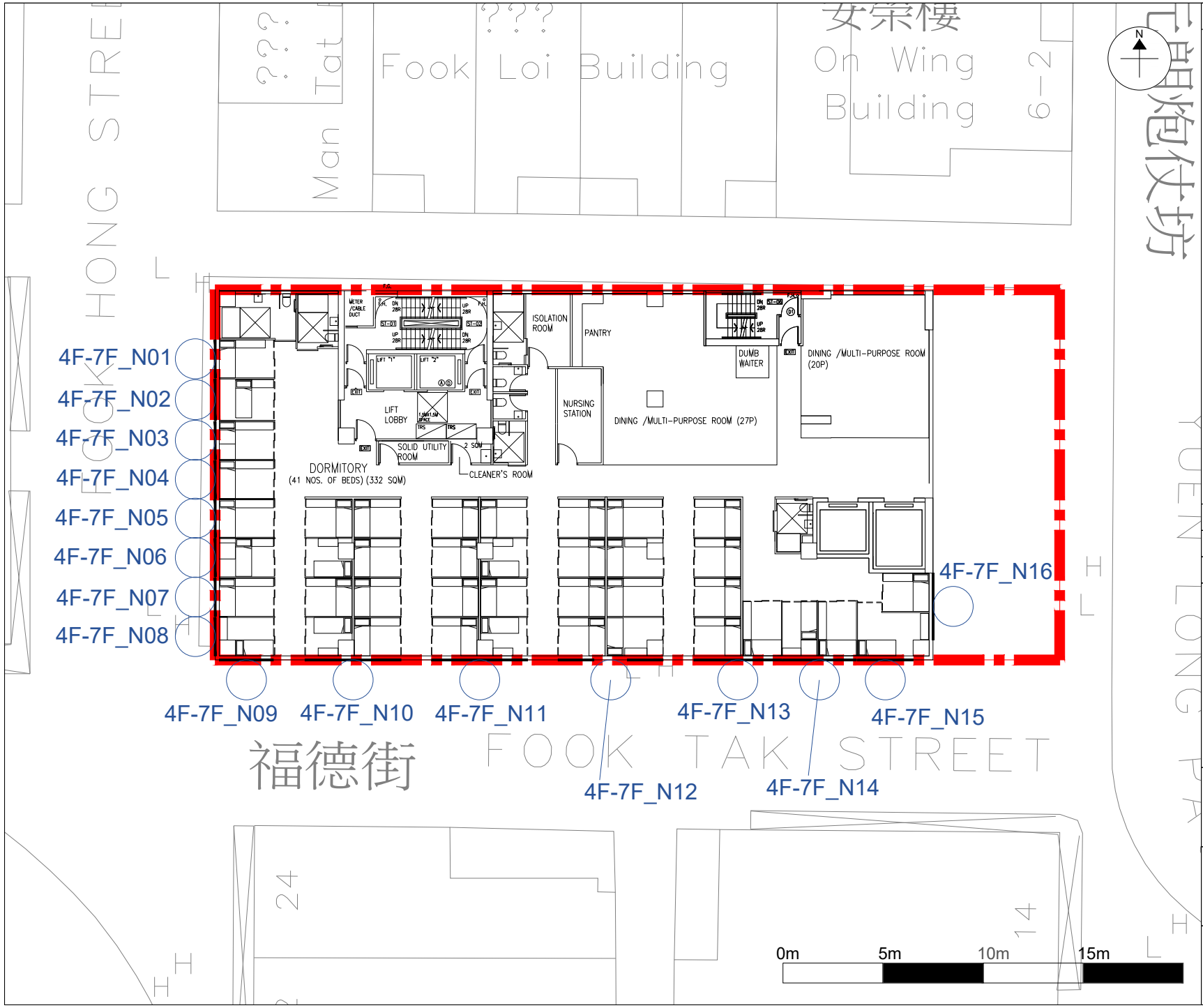
Figure Title

Location of Noise Sensitive Receivers for Road Traffic Noise Assessment (3/F)

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

BeeXergy Consulting Limited

\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 3.2a-e NSRs for TNIA.dwg



LEGEND:

Project Site

NSR_ID Noise Sensitive Receiver

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240226	20240226	20240226

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

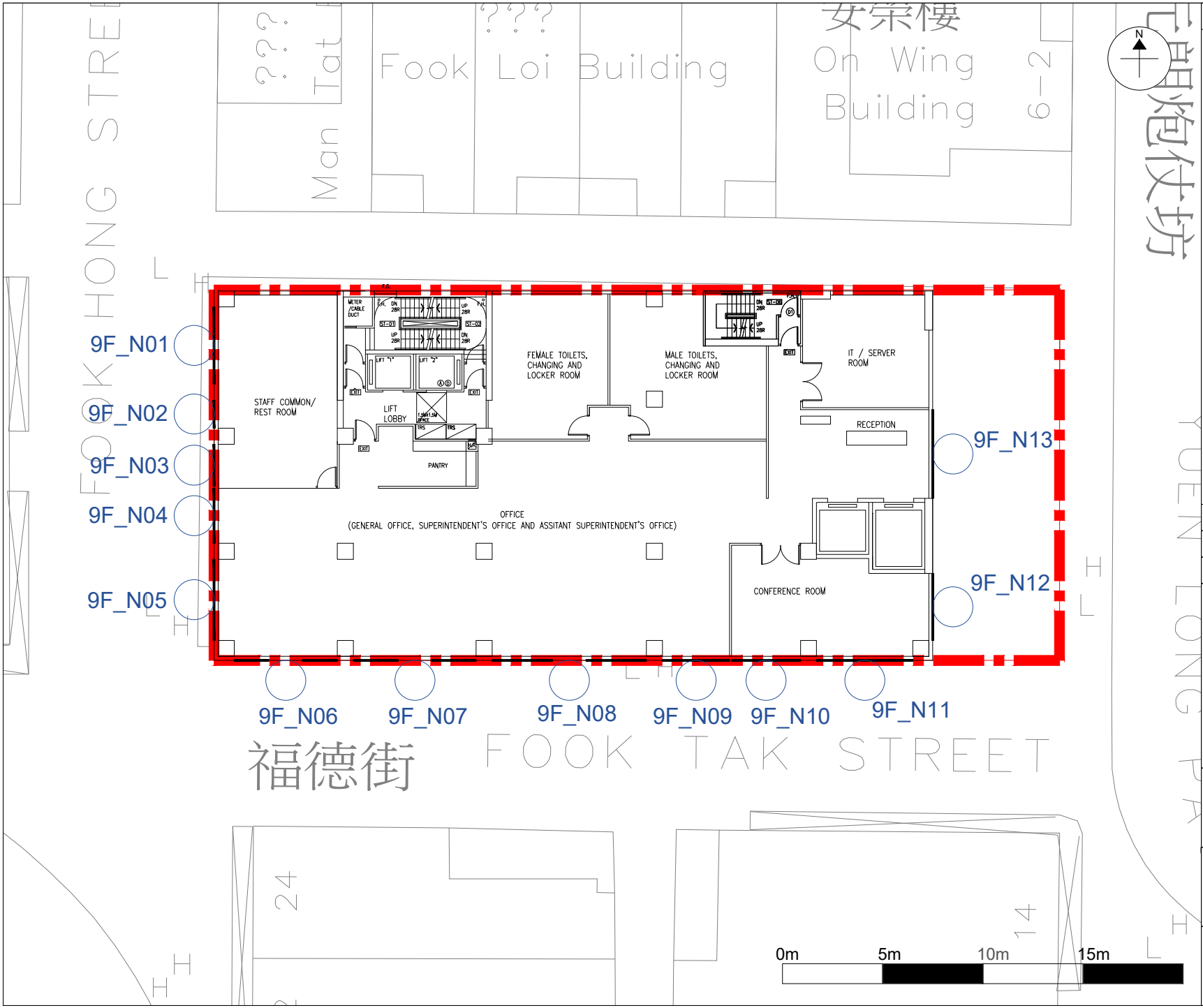
Figure Title

Location of Noise Sensitive Receivers for Road Traffic Noise Assessment (4/F - 7/F)

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

BeeXergy Consulting Limited

\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 3.2a-e NSRs for TNIA.dwg



LEGEND:

Project Site

NSR_ID Noise Sensitive Receiver

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240226	20240226	20240226

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

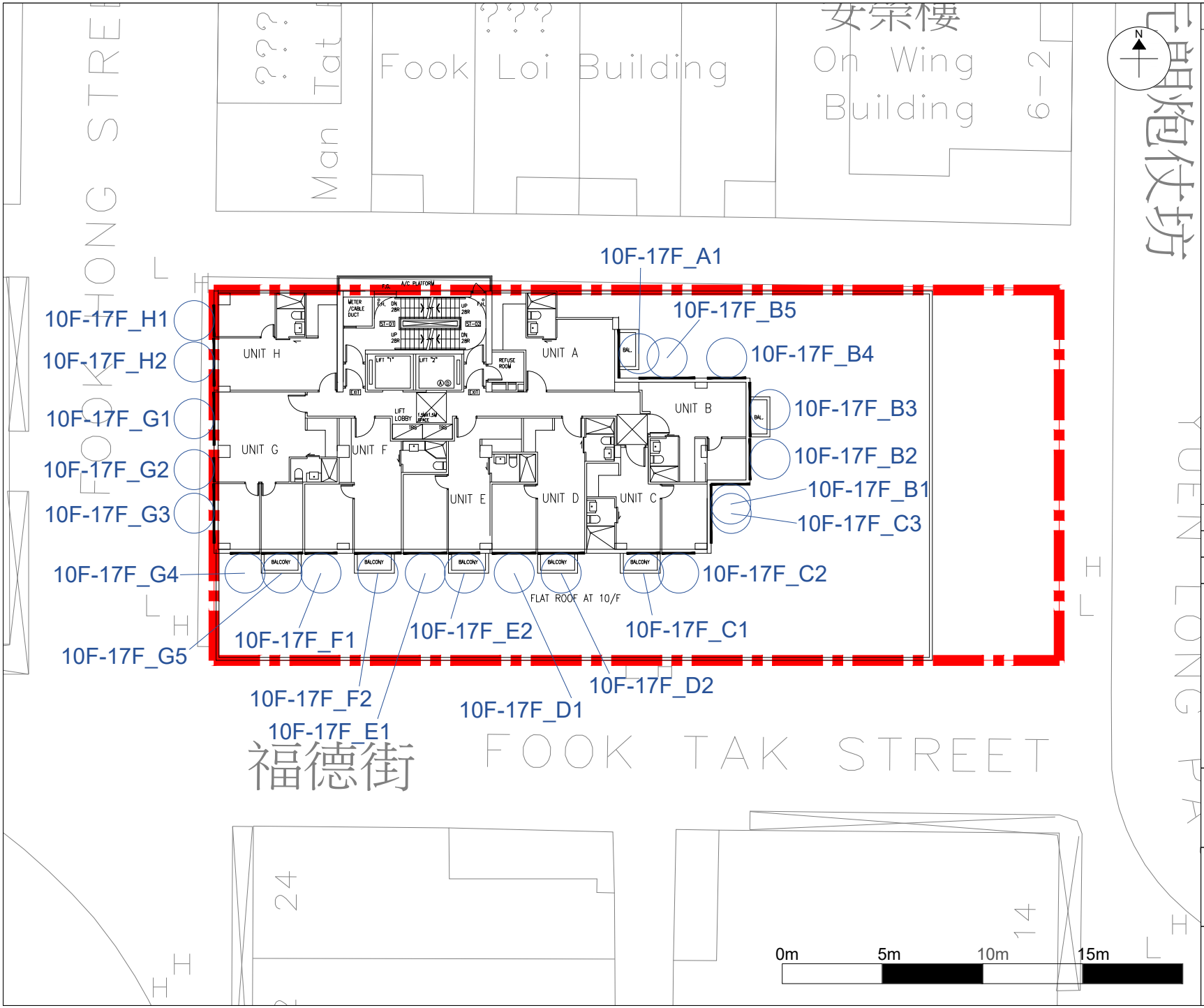
Figure Title

Location of Noise Sensitive Receivers for Road Traffic Noise Assessment (9/F)

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

BeeXergy Consulting Limited

\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 3.2a-e NSRs for TNIA.dwg



LEGEND:

Project Site

NSR_ID Noise Sensitive Receiver

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240226	20240226	20240226

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

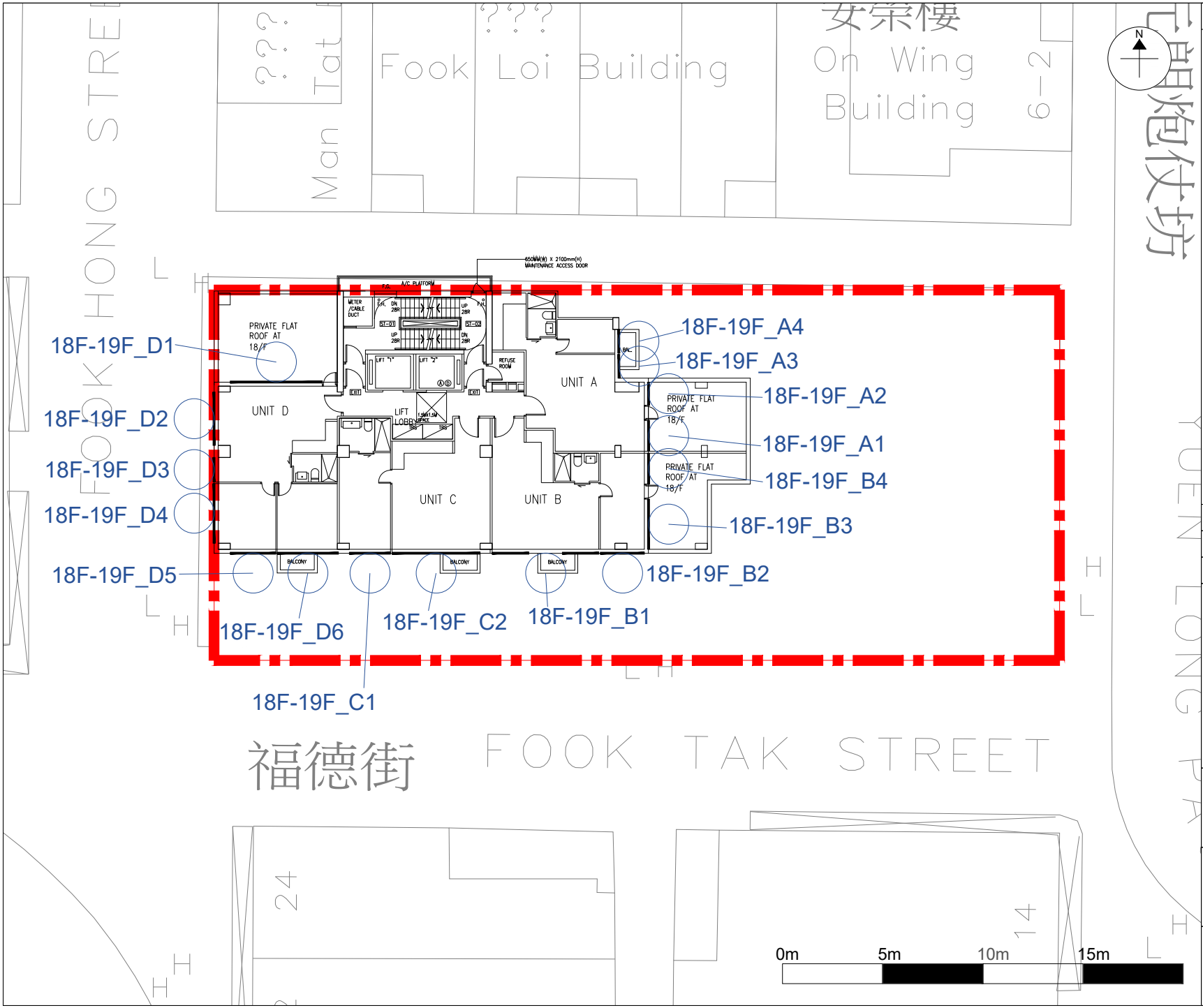
Figure Title

Location of Noise Sensitive Receivers for Road Traffic Noise Assessment (10/F-17/F)

Figure No.	**Rev.**
Figure 3.2d	0

BeeXergy Consulting Limited

\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 3.2a-e NSRs for TNIA.dwg



LEGEND:

- Project Site
- NSR_ID — Noise Sensitive Receiver

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240226	20240226	20240226

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

Figure Title

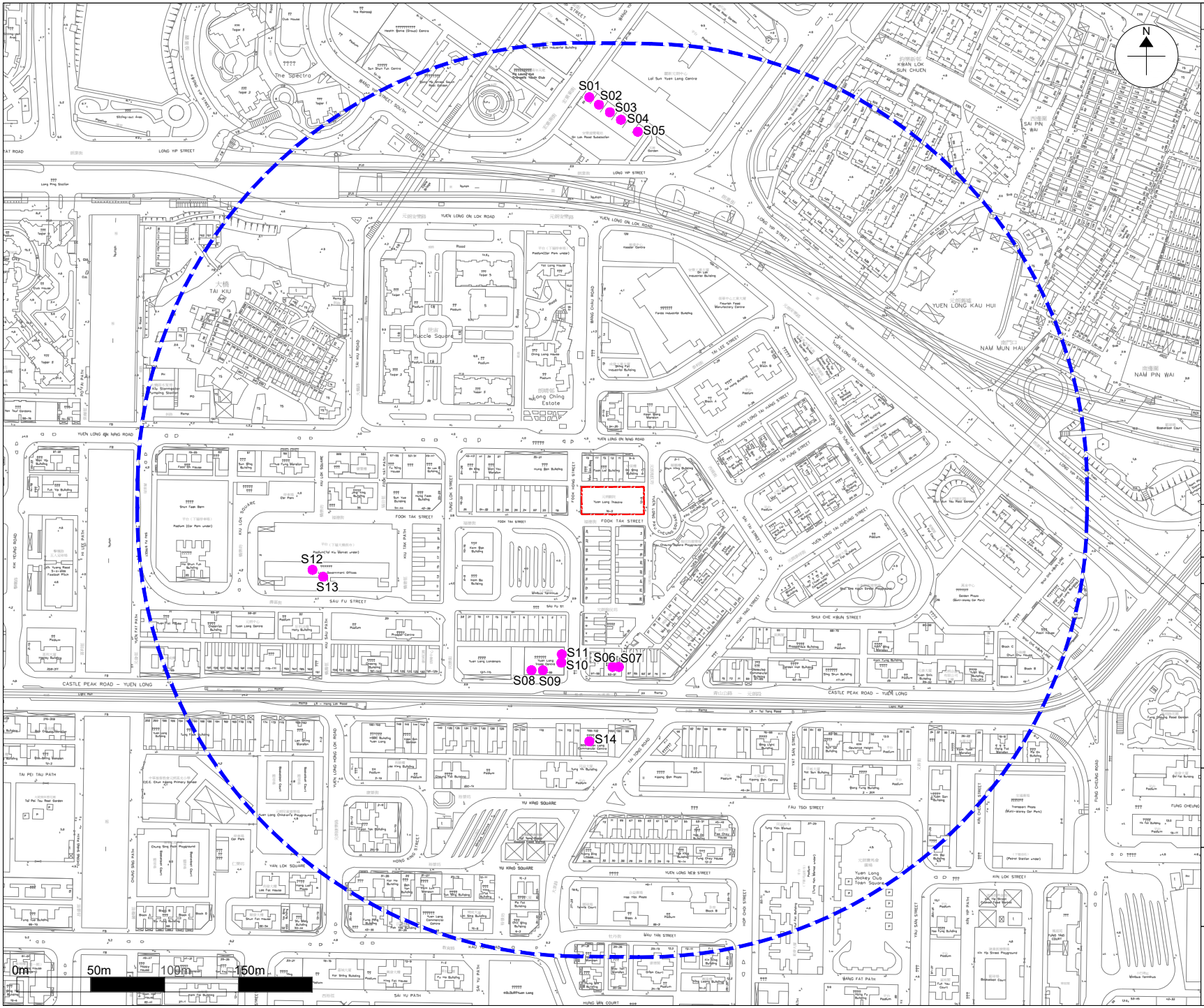
Location of Noise Sensitive Receivers for Road Traffic Noise Assessment (18/F-19/F)

Figure No.	Rev.
Figure 3.2e	0

BeeXergy Consulting Limited

\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 3.2a-e NSRs for TNIA.dwg

FIGURE 3.3
LOCATION OF MAJOR FIXED NOISE SOURCES



LEGEND:

- Project Site
- 300m Assessment Area for Noise
- Major Fixed Noise Sources

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240122	20240122	20240122

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

Figure Title

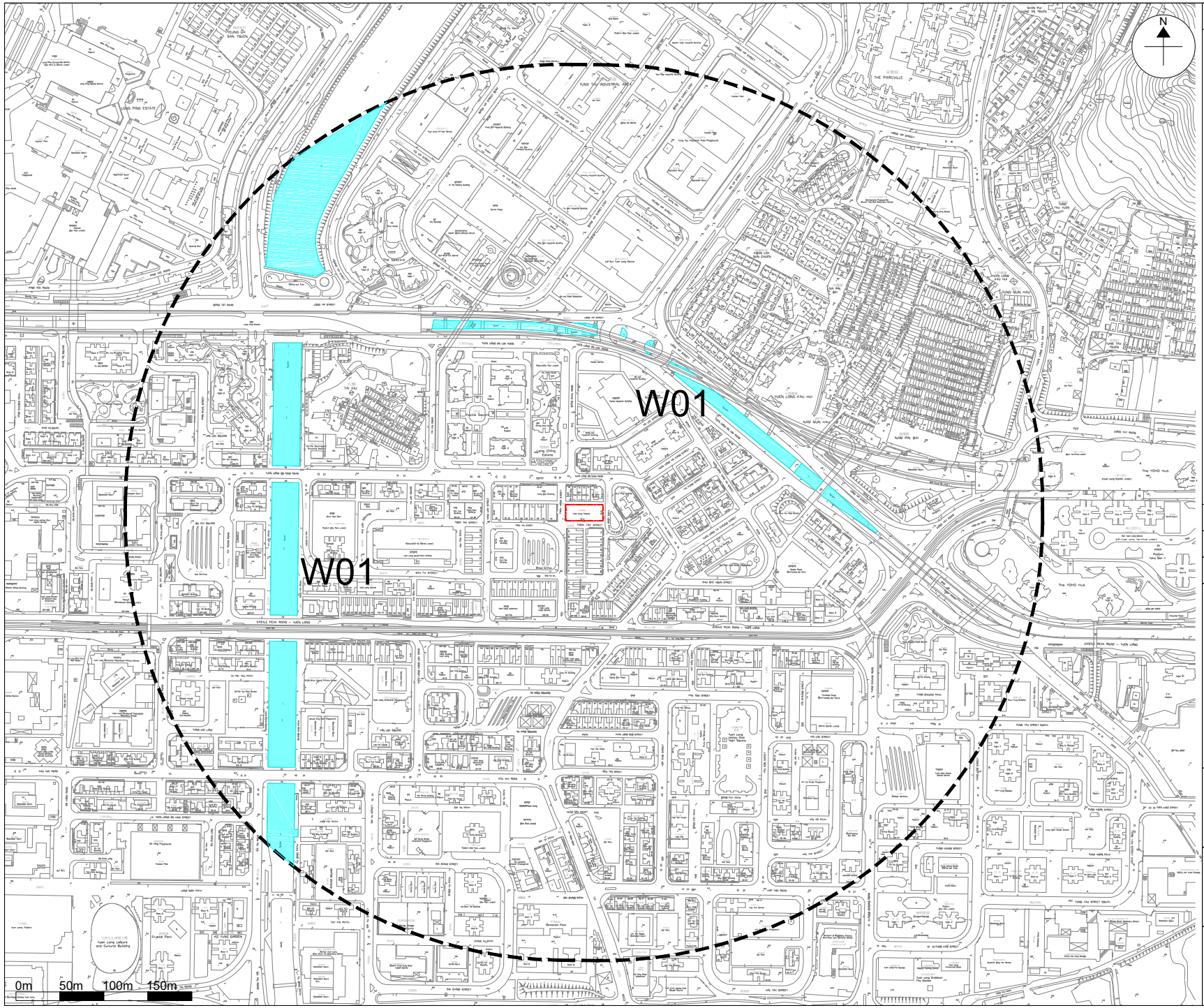
Location of Major Fixed Noise Sources

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

BeeXergy Consulting Limited

\\BEEXERGY_NAS\Proj.Work\23_Work\DeSpace - EA for RCHE & Residential Development at Yuen Long Theatre (W23508)\PREP\EA Report\RT23508-EA-01_v0\Figure\Working\Figure 3.3 Fixed Noise Sources.dwg

FIGURE 4.1
LOCATION OF WATER SENSITIVE RECEIVER



LEGEND:

- Project Site
- 500m Assessment Area for Water Quality
- Water Sensitive Receiver

	Prepared	Checked	Approved
Initial	RW	ZC	HM
Date	20240226	20240226	20240226

Project Title

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

Figure Title

Location of Water Sensitive Receiver

Figure No.	**Rev.**
Figure 4.1	0

BXG

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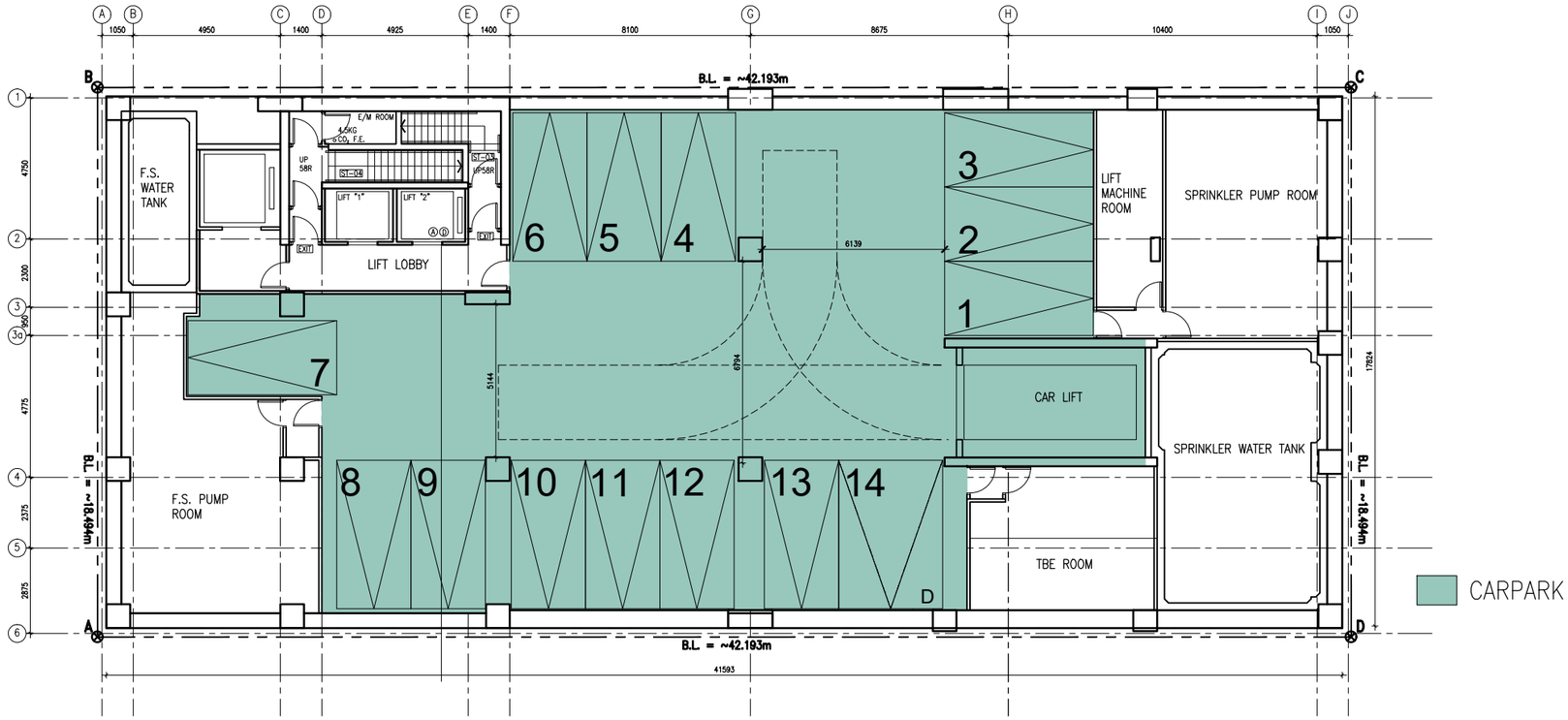
APPENDIX 1.1
MASTER LAYOUT PLAN



B2/F LAYOUT PLAN

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

Drawing Title:

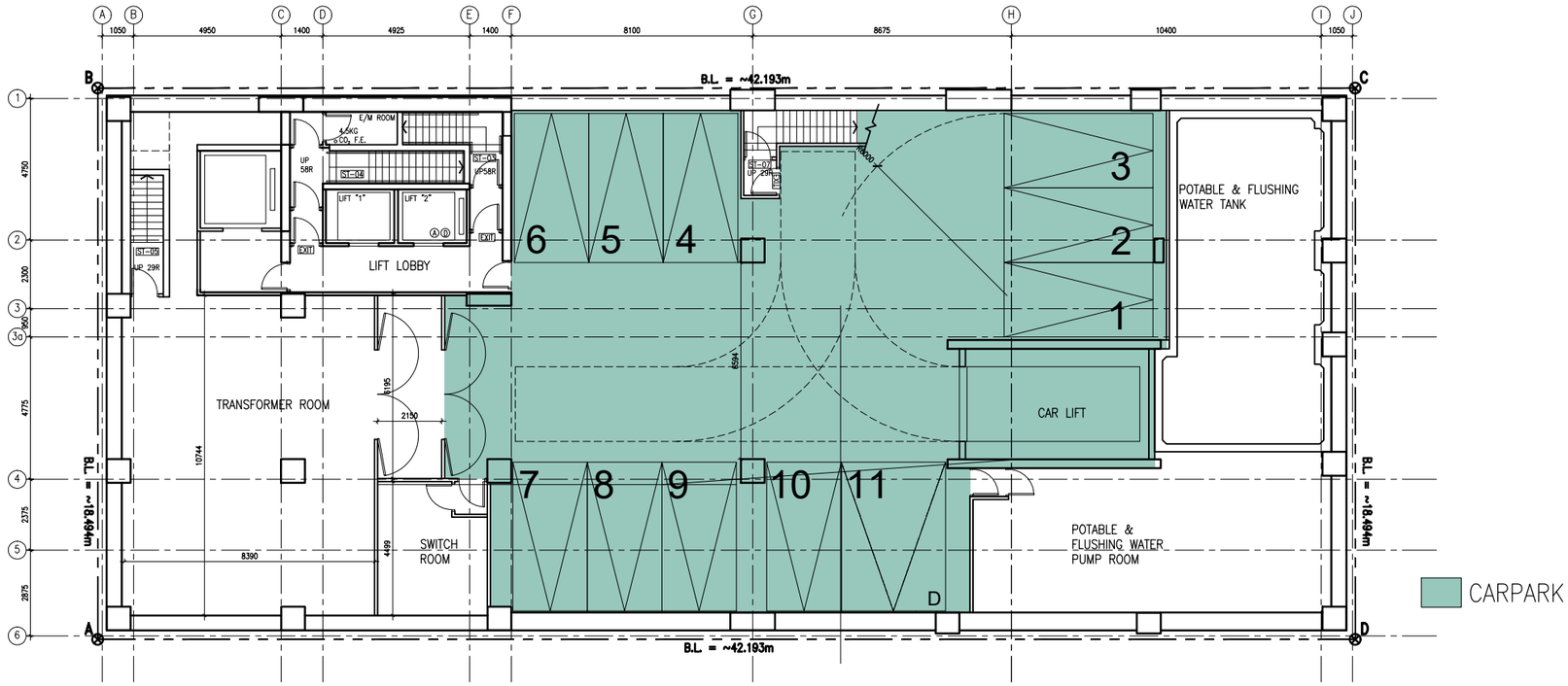
B2/F LAYOUT PLAN

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number

GBP001

Revision Letter



B1/F LAYOUT PLAN

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

Drawing Title:

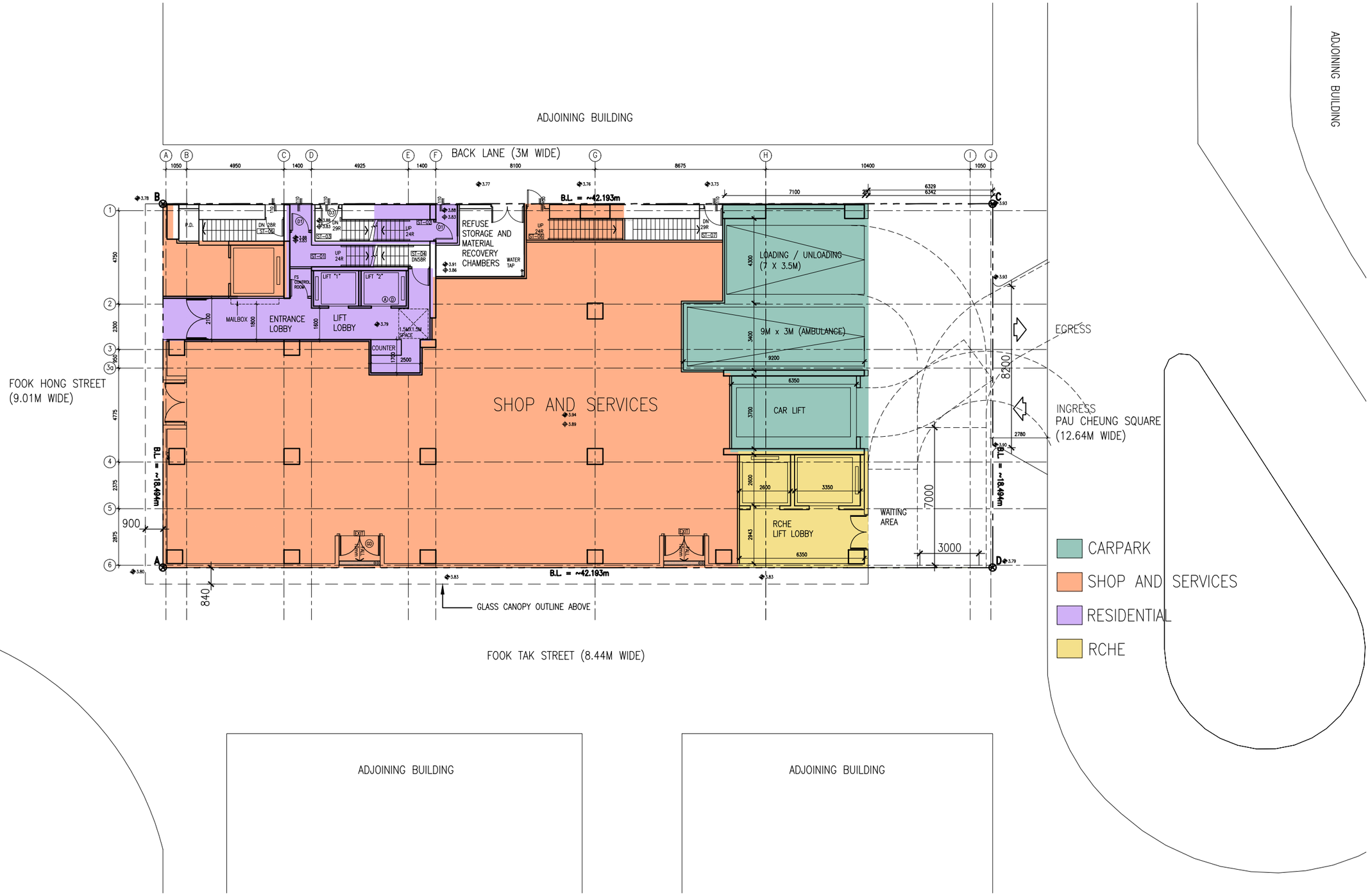
B1/F LAYOUT PLAN

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number

GBP002

Revision Letter



G/F LAYOUT PLAN

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

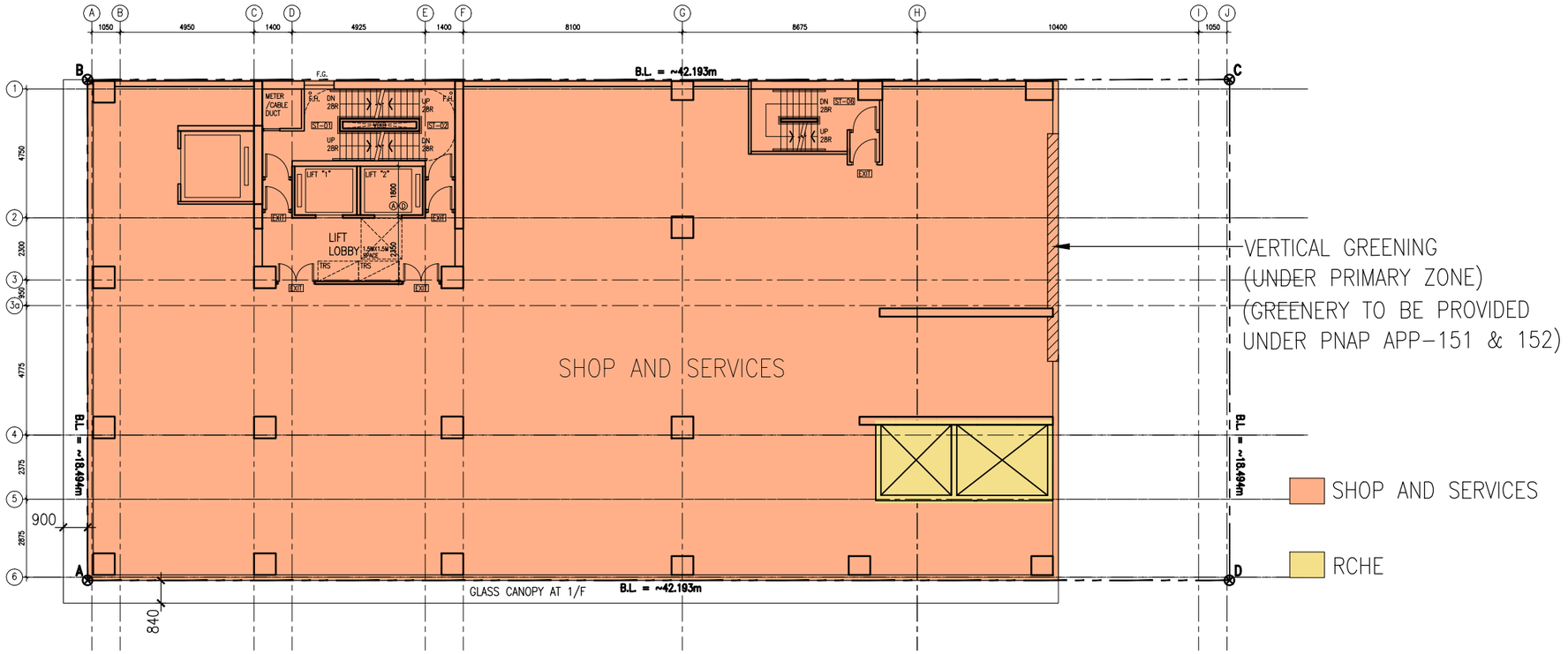
Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

Drawing Title:
G/F LAYOUT PLAN

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number
GBP003

Revision Letter



1/F TO 2/F LAYOUT PLAN

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

Drawing Title:

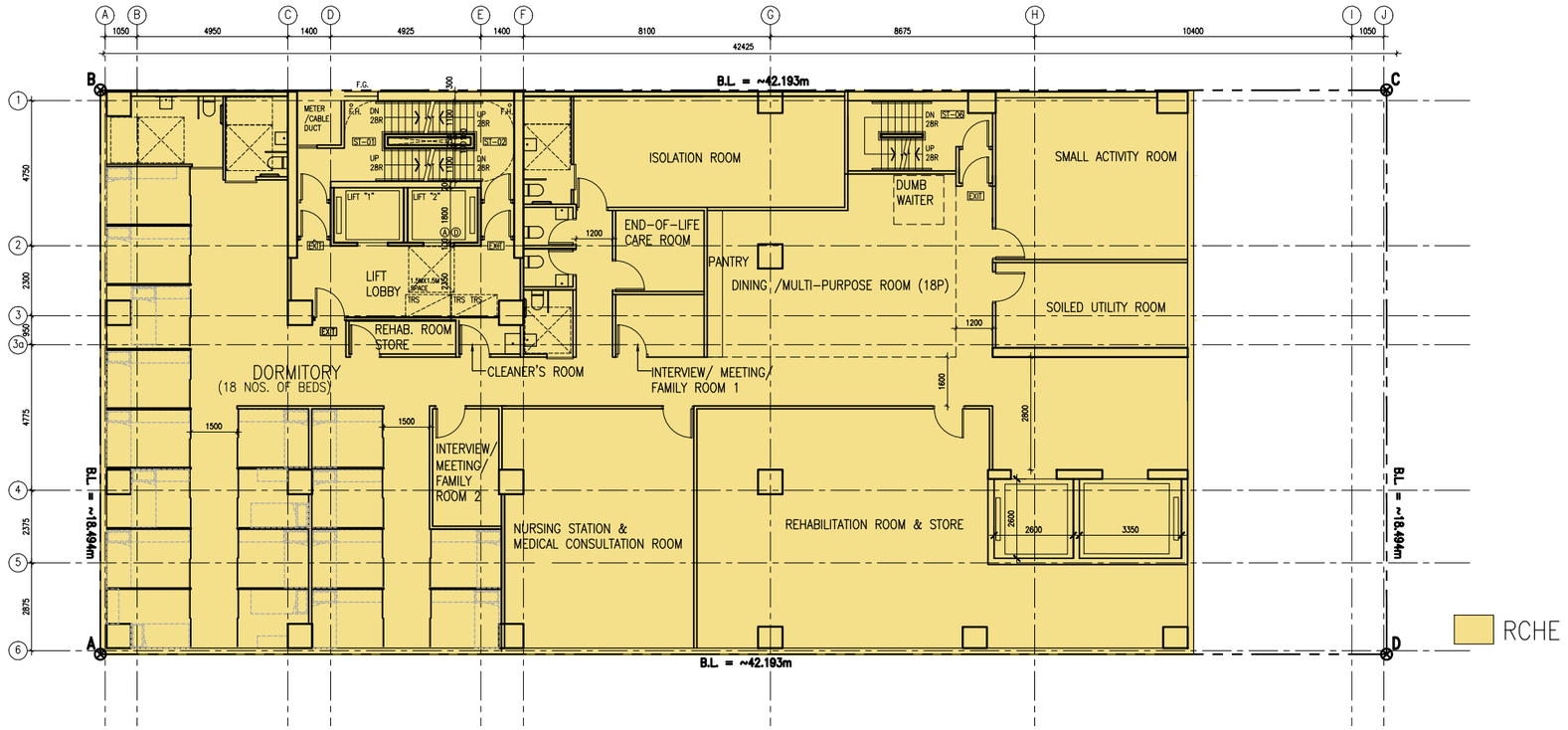
1/F TO 2/F LAYOUT PLAN

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number

GBP004

Revision Letter



3/F LAYOUT PLAN
(DORMITORY FOR RCHE)

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

Drawing Title:

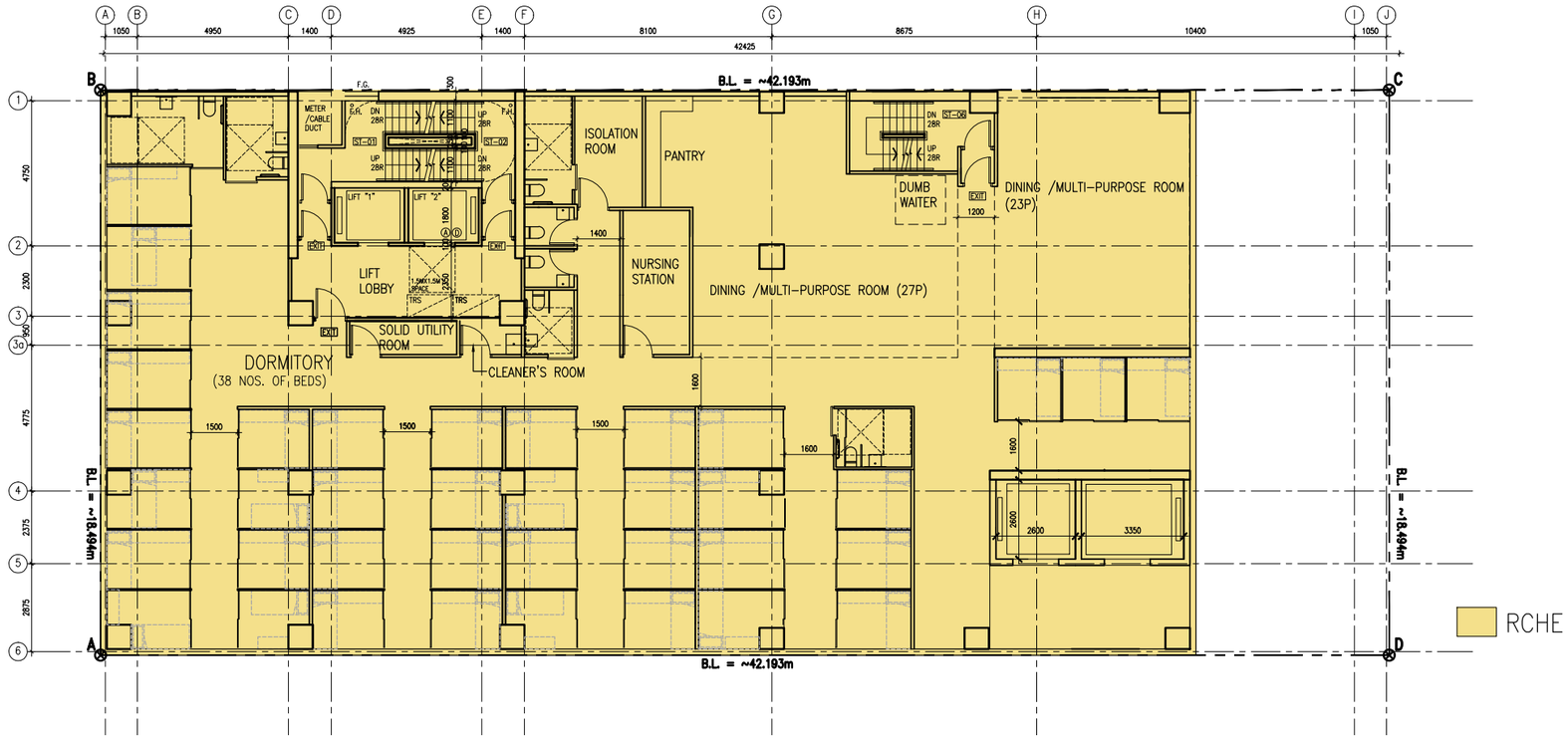
3/F LAYOUT PLAN

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number

GBP005

Revision Letter



4/F TO 7/F LAYOUT PLAN
(DORMITORY FOR RCHE)

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

Drawing Title:

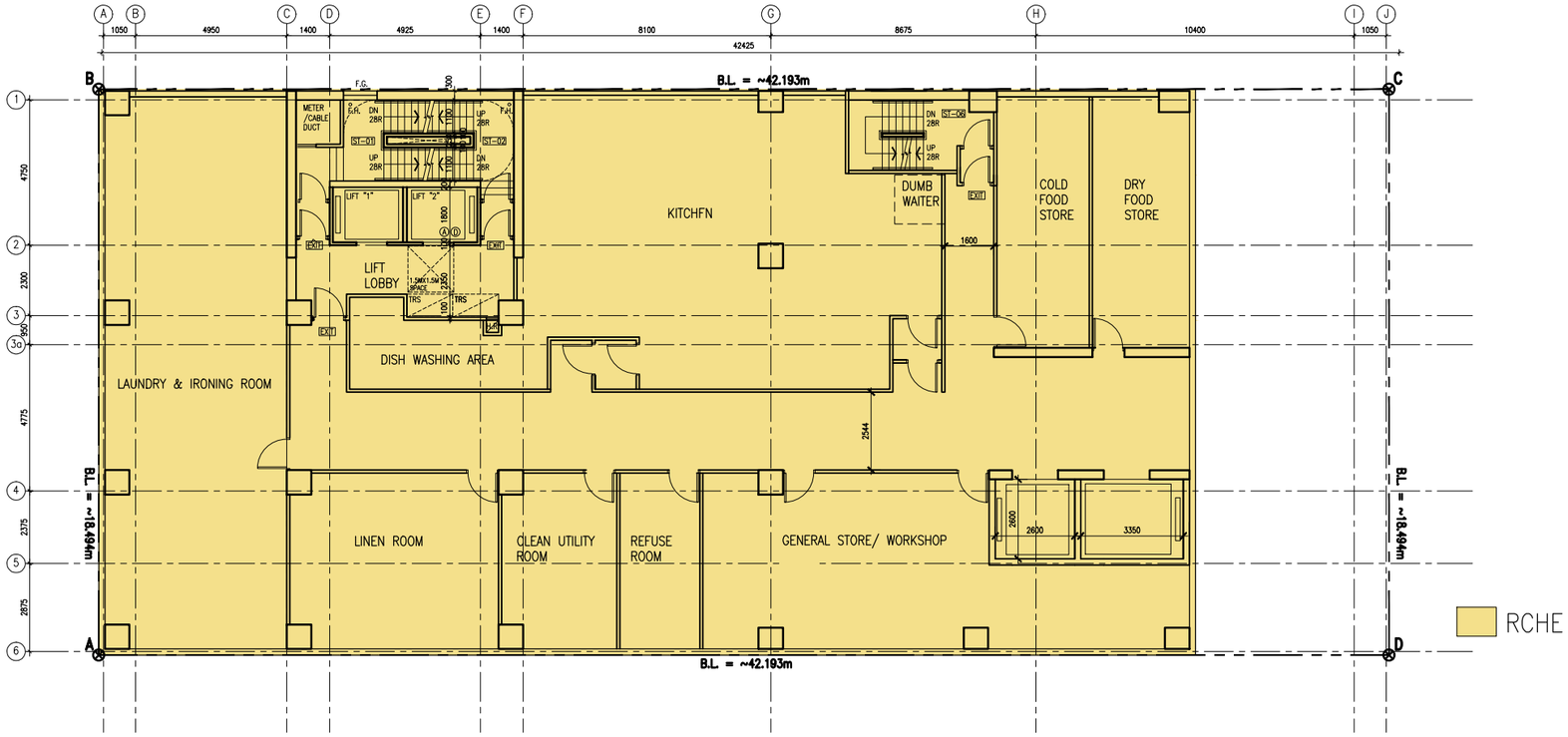
4/F TO 7/F LAYOUT PLAN

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number

GBP006

Revision Letter



8/F LAYOUT PLAN
(OFFICE & BOH FOR RCHE)

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

Drawing Title:

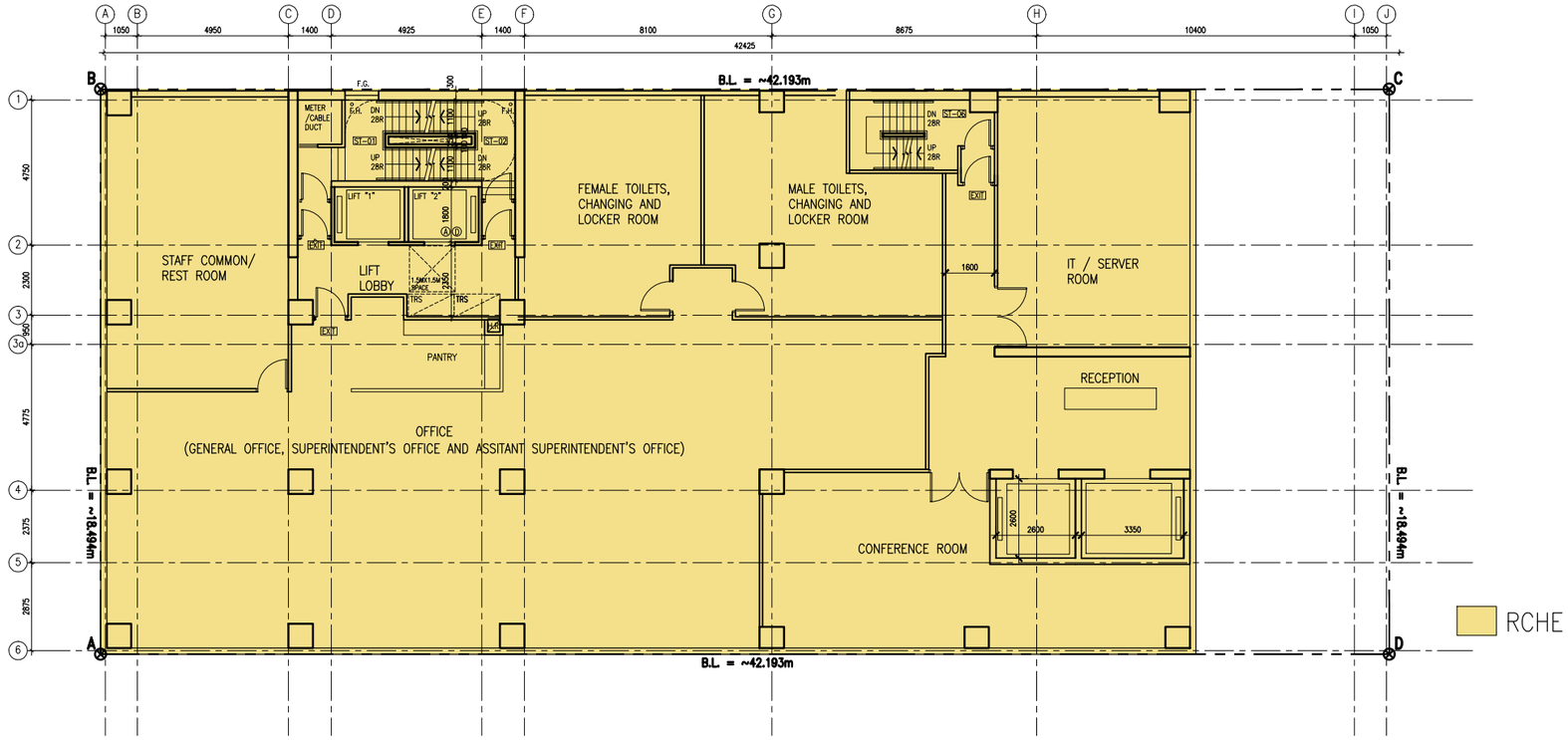
8/F LAYOUT PLAN

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number

GBP007

Revision Letter



9/F LAYOUT PLAN
(OFFICE & BOH FOR RCHE)

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

Drawing Title:

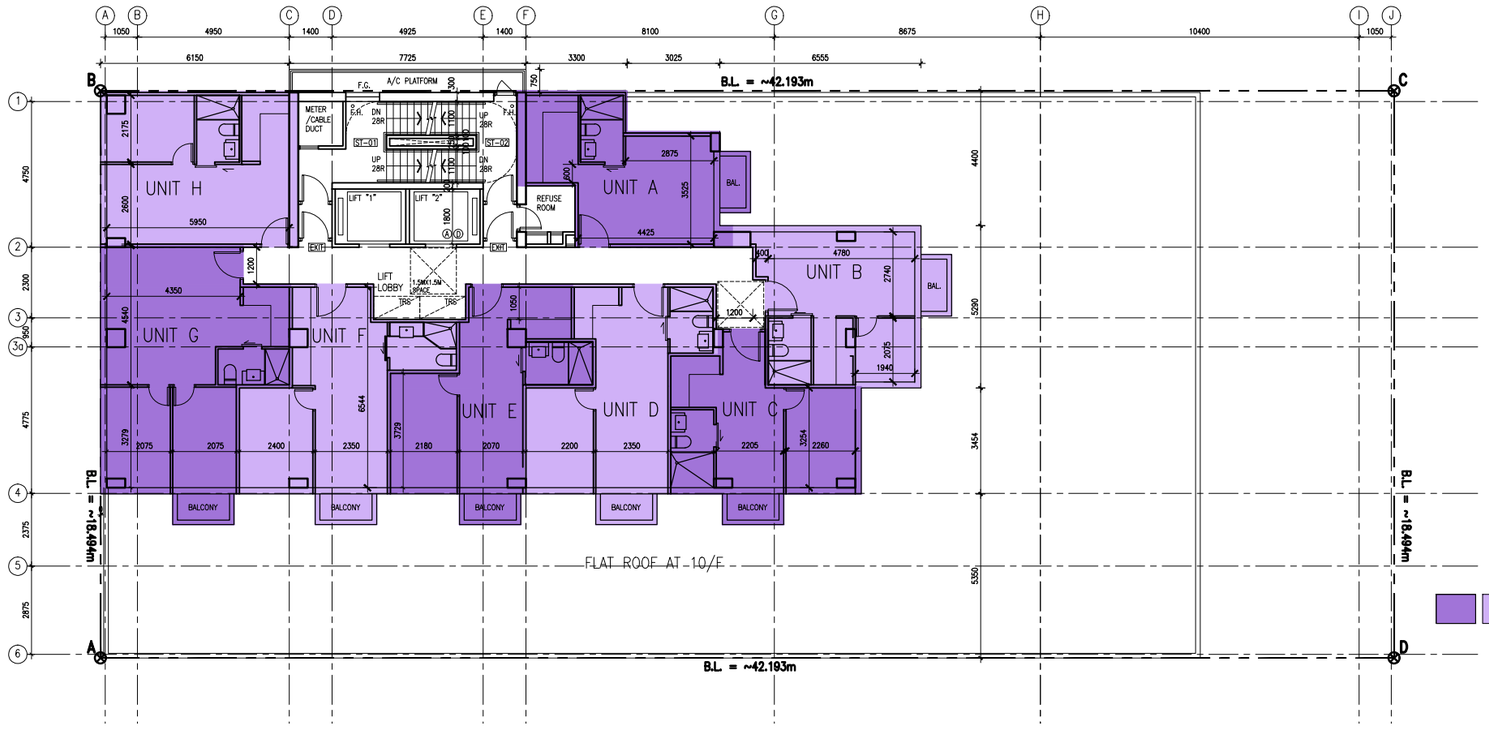
9/F LAYOUT PLAN

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number

GBP008

Revision Letter



10/F TO 17/F LAYOUT PLAN

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

Drawing Title:

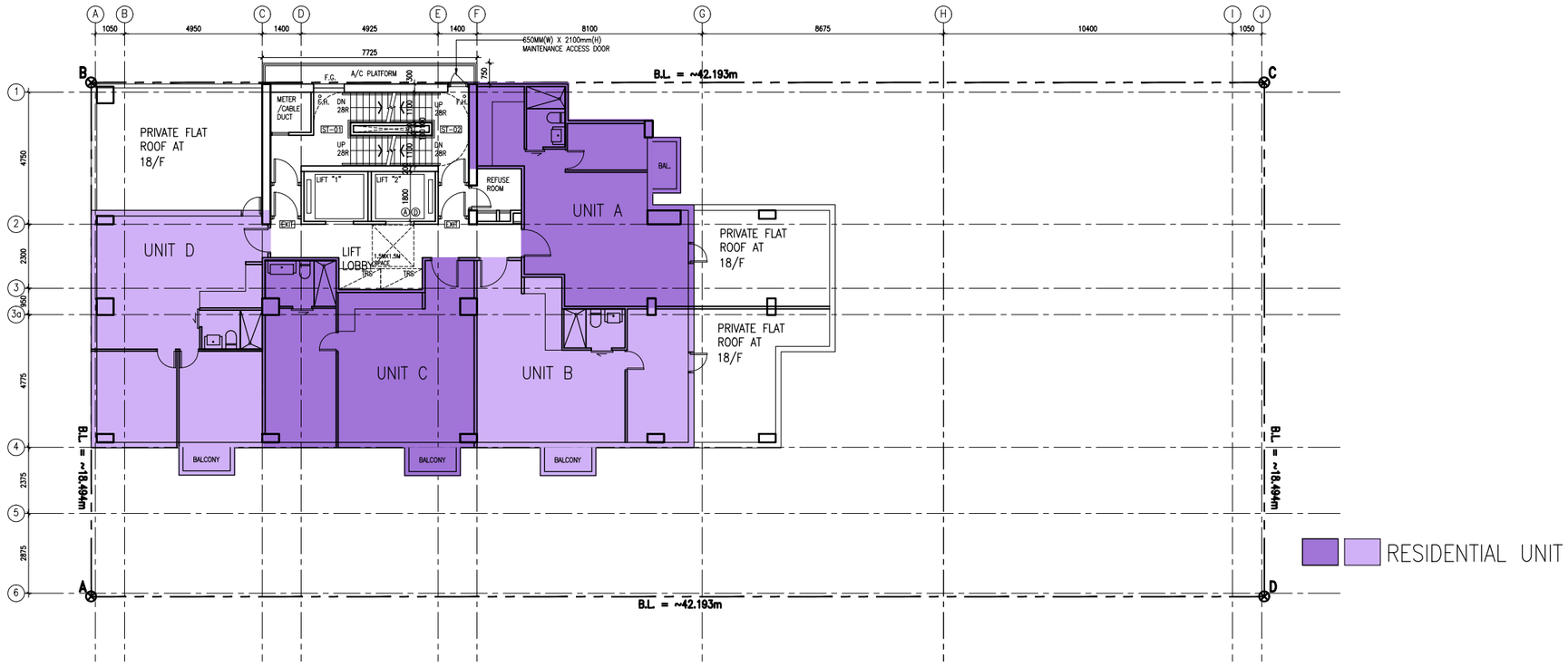
10/F TO 17/F LAYOUT PLAN

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number

GBP009

Revision Letter



18/F TO 19/F LAYOUT PLAN

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

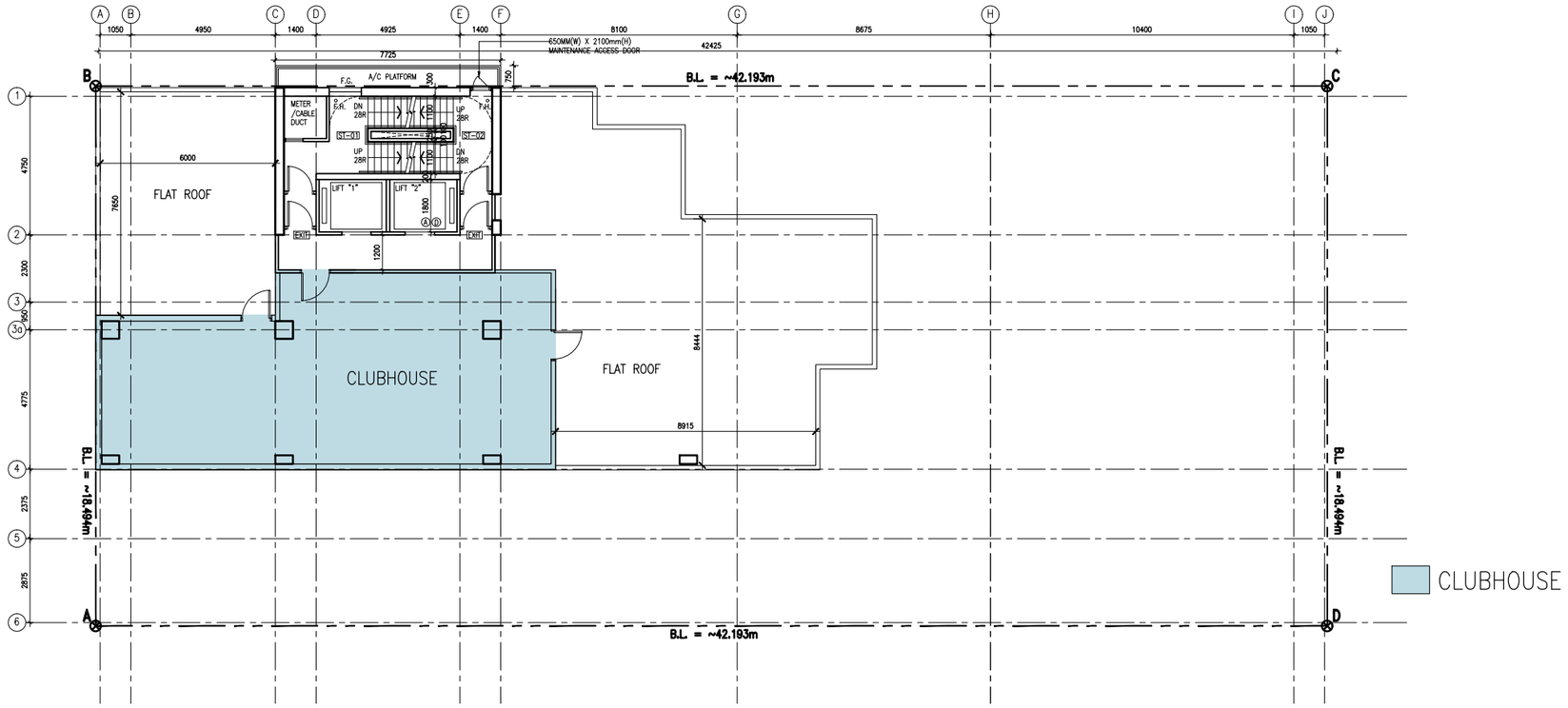
Drawing Title:

18/F TO 19/F LAYOUT PLAN

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number
GBP010

Revision Letter



20/F (CLUBHOUSE) LAYOUT PLAN

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

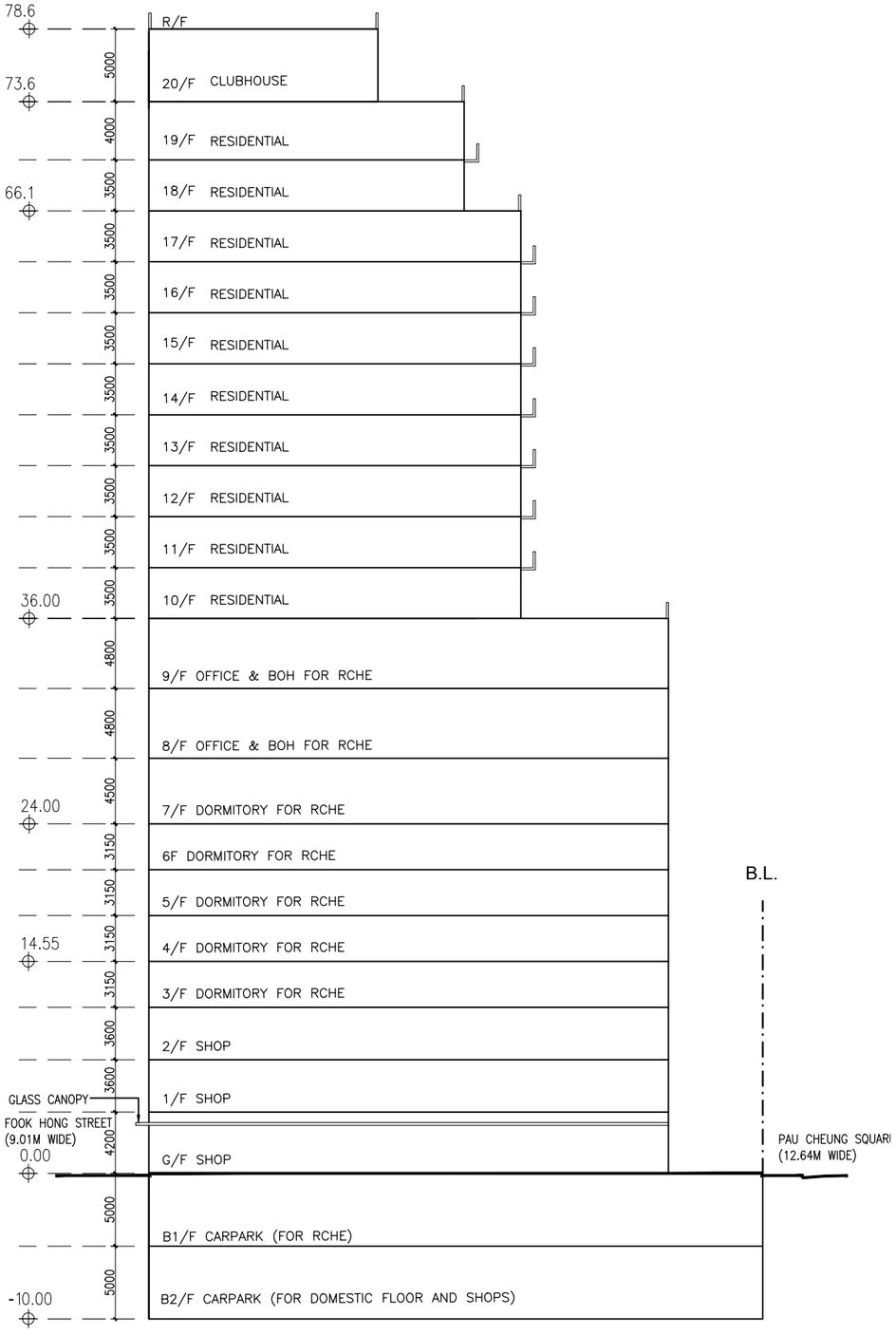
Drawing Title:

20/F (CLUBHOUSE)
LAYOUT PLAN

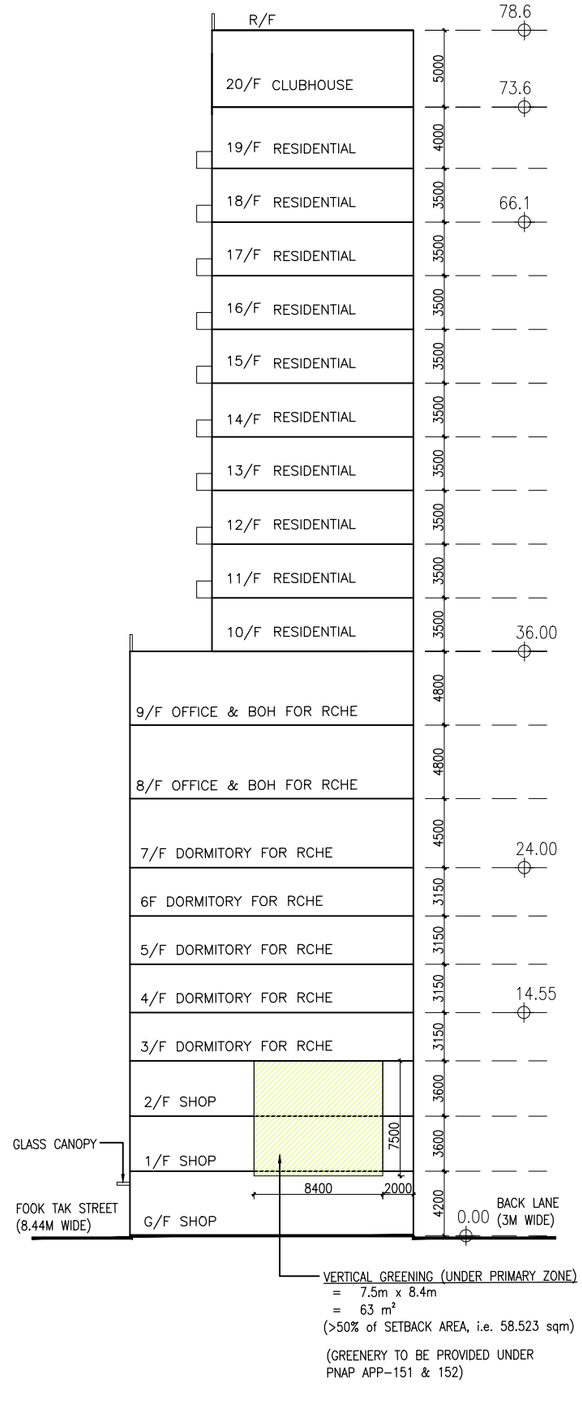
Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 200	Paper: A3

Drawing Number: GBP011

Revision Letter:



SCHEMATIC SECTION
(FACING FOOK TAK STREET)



SCHEMATIC ELEVATION
(FACING PAU CHEUNG SQUARE)

Rev.	Date	Description

Project Name:

Redevelopment of
Yuen Long Theatre
at Lot No. 3678 in
D.D. 120, Yuen Long, N.T.

Planning Consultant :
DeSPACE (International) Limited

Architect :
I Consultants & Contracting Company Limited

Traffic Consultant :
CTA Consultants Limited

Environmental Consultant :
BeeXergy Consulting Limited

Structural and Geotechnical Engineer :
S. T. Wong & Partners Limited

Drawing Title:

SCHEMATIC SECTION
AND ELEVATION

Designed by:	JODY
Drawn by:	JODY
Checked by:	CAL.
Scale: 1 : 400	Paper: A3

Drawing Number
GBP013

Revision Letter

APPENDIX 3.1
TRAFFIC FORECAST FOR YEAR 2042

23122HK

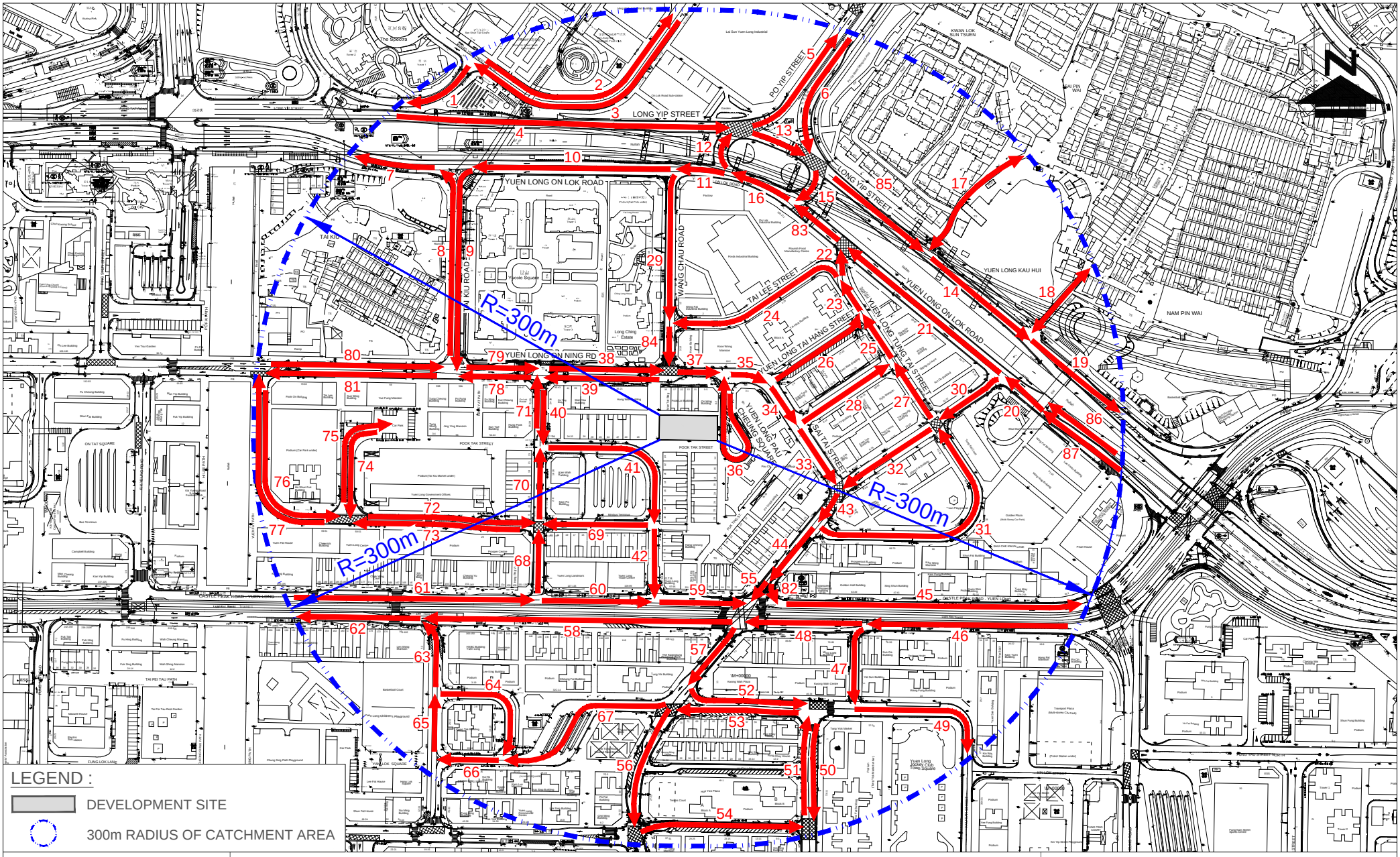
Yuen Long Theatre DD 120 Lot 3678

TRAFFIC FORECAST FOR TRAFFIC NOISE IMPACT ASSESSMENT

CTA Consultants Limited 志達顧問有限公司

Link No.	Road Name	Speed	Direction	Year 2042			
				AM Peak		PM Peak	
				Traffic Flow (veh/hr)	HV%	Traffic Flow (veh/hr)	HV%
1	Kwong Yip Street	50	WB	30	18%	30	19%
2	Wang Yip Street South / Wang Yip Street East	50	NB	50	24%	80	10%
3	Wang Yip Street South / Wang Yip Street East	50	WB	30	36%	60	12%
4	Long Yip Street	50	EB	2,450	22%	2,030	13%
5	Po Yip Street	50	NB	480	22%	450	17%
6	Po Yip Street	50	SB	1,340	32%	1,040	13%
7	Yuen Long On Lok Road	50	WB	2,340	25%	2,310	15%
8	Tai Kiu Road	50	NB	280	44%	310	28%
9	Tai Kiu Road	50	SB	390	14%	380	14%
10	Yuen Long On Lok Road	50	WB	2,420	19%	2,380	13%
11	Yuen Long On Lok Road	50	WB	2,740	19%	2,830	13%
12	Yuen Long On Lok Road/Long Yip Street	50	Roundabout	630	22%	630	16%
13	Long Yip Street	50	Roundabout	2,600	22%	2,180	13%
14	Long Yip Street	50	EB	3,280	26%	2,600	14%
15	Yuen Long On Lok Road/Long Yip Street	50	Roundabout	680	22%	650	12%
16	Yuen Long On Lok Road	50	Roundabout	3,370	23%	3,460	15%
17	Sai Kai Road	50	2-way	50	15%	50	12%
18	Cheung Shing Street	50	2-way	50	13%	50	11%
19	Long Yip Street	50	EB	3,310	24%	2,620	10%
20	Yuen Long On Lok Road	50	WB	2,520	18%	2,640	11%
21	Yuen Long On Lok Road	50	WB	2,300	19%	2,350	13%
22	Yuen Long Tung Tai Street	50	NB	390	20%	460	14%
23	Yuen Long Tung Tai Street	50	NB	490	20%	550	13%
24	Tai Lee Street	50	WB	100	25%	90	18%
25	Yuen Long Tung Tai Street	50	NB	250	24%	280	17%
26	Yuen Long Tai Hang Street	50	EB	240	16%	270	10%
27	Yuen Long Tung Tai Street	50	NB	200	26%	210	16%
28	Tai Fung Street	50	EB	50	24%	70	17%
29	Wang Chau Road	50	SB	320	15%	450	10%
30	Yuen Long Tai Cheung Street	50	WB	220	26%	290	22%
31	Shui Che Kwun Street	50	NB	210	35%	230	25%
32	Yuen Long Tai Cheung Street	50	WB	230	34%	300	20%
33	Sai Tai Street	50	SB	400	19%	460	10%
34	Sai Tai Street	50	SB	450	17%	530	10%
35	Yuen Long On Ning Road	50	EB	690	17%	790	10%
36	Yuen Long Pau Cheung Square	50	NB	80	10%	60	10%
37	Yuen Long On Ning Road	50	EB	610	17%	730	10%
38	Yuen Long On Ning Road	50	EB	580	17%	660	10%
39	Yuen Long On Ning Road	50	WB	490	15%	490	10%
40	Tung Lok Street	50	SB	150	30%	230	22%
41	Fook Tak Street	50	SB	150	30%	230	22%
42	Fook Hong Street	50	SB	60	20%	90	25%
43	Kuk Ting Street	50	WB	630	25%	760	16%
44	Kuk Ting Street	50	WB	420	20%	530	12%
45	Castle Peak Road - Yuen Long	50	EB	550	53%	570	32%
46	Castle Peak Road - Yuen Long	50	WB	870	36%	690	32%
47	Yat San Street	50	SB	90	41%	130	18%
48	Castle Peak Road - Yuen Long	50	WB	780	36%	560	34%
49	Fau Tsoi Street/Yau San Street	50	SB	410	37%	500	23%
50	Hop Choi Street	50	SB	5	75%	20	10%
51	Hop Choi Street	50	NB	260	17%	290	6%
52	Fau Tsoi Street	50	EB	130	35%	80	26%
53	Fau Tsoi Street	50	WB	60	10%	90	17%
54	Mau Tan Street	50	EB	420	25%	350	22%
55	Kuk Ting Street	50	SB	360	17%	440	11%
56	Tai Tong Road	50	SB	290	16%	360	10%
57	Tai Tong Road	50	SB	610	22%	760	16%
58	Castle Peak Road - Yuen Long	50	WB	510	40%	470	44%
59	Castle Peak Road - Yuen Long	50	EB	490	58%	480	37%

Link No.	Road Name	Speed	Direction	Year 2042			
				AM Peak		PM Peak	
				Traffic Flow (veh/hr)	HV%	Traffic Flow (veh/hr)	HV%
60	Castle Peak Road - Yuen Long	50	EB	430	55%	390	31%
61	Castle Peak Road - Yuen Long	50	EB	460	52%	400	29%
62	Castle Peak Road - Yuen Long	50	WB	650	38%	630	36%
63	Yuen Long Hong Lok Road	50	NB	140	29%	160	20%
64	Hong King Street	50	SB	50	23%	50	10%
65	Yuen Long Hong Lok Road	50	NB	120	34%	150	12%
66	Hong King Street	50	WB	130	34%	180	23%
67	Yu King Square	50	WB	80	36%	130	24%
68	Tung Lok Street	50	NB	30	33%	10	17%
69	Sau Fu Street	50	WB	90	48%	140	26%
70	Tung Lok Street	50	NB	200	39%	250	18%
71	Tung Lok Street	50	NB	180	26%	230	16%
72	Sau Fu Street	50	EB	130	34%	160	12%
73	Sau Fu Street	50	WB	150	34%	150	23%
74	Kiu Lok Square	50	SB	50	18%	50	15%
75	Kiu Lok Square	50	NB	50	15%	50	15%
76	Sau Fu Street	50	EB	170	11%	200	17%
77	Sau Fu Street	50	NB	180	23%	180	14%
78	Yuen Long On Ning Road	50	WB	340	28%	260	10%
79	Yuen Long On Ning Road	50	EB	400	10%	430	10%
80	Yuen Long On Ning Road	50	EB	520	23%	570	15%
81	Yuen Long On Ning Road	50	WB	550	19%	560	10%
82	Kuk Ting Street	50	SB	60	22%	90	14%
83	Yuen Long On Lok Road	50	WB	2,690	22%	2,810	15%
84	Wang Chau Road	50	SB	420	16%	540	11%
85	Long Yip Street	50	EB	3260	28%	2570	16%
86	Castle Peak Road - Yuen Long Section (Elevated)	50	WB	1950	18%	1940	10%
87	Castle Peak Road - Yuen Long Section (at grade)	50	WB	570	20%	700	18%



LEGEND :

DEVELOPMENT SITE

300m RADIUS OF CATCHMENT AREA

FIGURE NO.: 1	PROJECT TITLE: Yuen Long Theatre DD120 Lot 3678	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 23122HK	DRAWING TITLE: INDEX PLAN FOR TNIA	
SCALE: 1 : 3750 @A4 / DATE: 20 FEB 2024		

APPENDIX 3.2

PREDICTED ROAD TRAFFIC NOISE LEVELS FOR AM PEAK HOUR (BASE CASE SCENARIO)

Predicted Road Traffic Noise Levels for AM Peak Hour (Base Case Scenario)

Floor	NAP ID	Description	Floor Height, mPD	Assessment Height, mPD	Noise Criteria, dB(A)	$L_{10\ (1\ hour)}$, dB(A)	Compliance
3/F	3F_N01	Dormitory	+15.40	+16.6	70	65	Yes
	3F_N02	Dormitory			70	65	Yes
	3F_N03	Dormitory			70	65	Yes
	3F_N04	Dormitory			70	65	Yes
	3F_N05	Dormitory			70	65	Yes
	3F_N06	Dormitory			70	66	Yes
	3F_N07	Dormitory			70	66	Yes
	3F_N08	Dormitory			70	67	Yes
	3F_N09	Dormitory			70	66	Yes
	3F_N10	Dormitory			70	64	Yes
	3F_N11	Dormitory			70	62	Yes
	3F_N12	Nursing Station & Medical Consultation Room			70	61	Yes
	3F_N13	Rehabilitation Room & Store			70	61	Yes
	3F_N14	Rehabilitation Room & Store			70	61	Yes
	3F_N15	Rehabilitation Room & Store			70	61	Yes
	3F_N16	Rehabilitation Room & Store			70	65	Yes
4/F	4F_N01	Dormitory	+18.55	+19.8	70	65	Yes
	4F_N02	Dormitory			70	65	Yes
	4F_N03	Dormitory			70	65	Yes
	4F_N04	Dormitory			70	65	Yes
	4F_N05	Dormitory			70	65	Yes
	4F_N06	Dormitory			70	65	Yes
	4F_N07	Dormitory			70	66	Yes
	4F_N08	Dormitory			70	66	Yes
	4F_N09	Dormitory			70	66	Yes
	4F_N10	Dormitory			70	63	Yes
	4F_N11	Dormitory			70	61	Yes
	4F_N12	Dormitory			70	61	Yes
	4F_N13	Dormitory			70	60	Yes
	4F_N14	Dormitory			70	60	Yes
	4F_N15	Dormitory			70	61	Yes
	4F_N16	Dormitory			70	65	Yes
5/F	5F_N01	Dormitory	+21.70	+22.9	70	65	Yes
	5F_N02	Dormitory			70	65	Yes
	5F_N03	Dormitory			70	65	Yes
	5F_N04	Dormitory			70	65	Yes
	5F_N05	Dormitory			70	65	Yes
	5F_N06	Dormitory			70	65	Yes
	5F_N07	Dormitory			70	66	Yes
	5F_N08	Dormitory			70	66	Yes
	5F_N09	Dormitory			70	65	Yes
	5F_N10	Dormitory			70	64	Yes
	5F_N11	Dormitory			70	61	Yes
	5F_N12	Dormitory			70	61	Yes
	5F_N13	Dormitory			70	60	Yes
	5F_N14	Dormitory			70	60	Yes
	5F_N15	Dormitory			70	61	Yes
	5F_N16	Dormitory			70	64	Yes
6/F	6F_N01	Dormitory	+24.85	+26.1	70	65	Yes
	6F_N02	Dormitory			70	65	Yes
	6F_N03	Dormitory			70	65	Yes
	6F_N04	Dormitory			70	65	Yes
	6F_N05	Dormitory			70	65	Yes
	6F_N06	Dormitory			70	65	Yes
	6F_N07	Dormitory			70	65	Yes
	6F_N08	Dormitory			70	66	Yes
	6F_N09	Dormitory			70	65	Yes
	6F_N10	Dormitory			70	64	Yes
	6F_N11	Dormitory			70	62	Yes
	6F_N12	Dormitory			70	61	Yes
	6F_N13	Dormitory			70	60	Yes
	6F_N14	Dormitory			70	60	Yes
	6F_N15	Dormitory			70	61	Yes
	6F_N16	Dormitory			70	64	Yes
7/F	7F_N01	Dormitory	+28.00	+29.2	70	65	Yes
	7F_N02	Dormitory			70	65	Yes
	7F_N03	Dormitory			70	65	Yes
	7F_N04	Dormitory			70	65	Yes
	7F_N05	Dormitory			70	65	Yes
	7F_N06	Dormitory			70	65	Yes
	7F_N07	Dormitory			70	65	Yes
	7F_N08	Dormitory			70	66	Yes

Predicted Road Traffic Noise Levels for AM Peak Hour (Base Case Scenario)

Floor	NAP ID	Description	Floor Height, mPD	Assessment Height, mPD	Noise Criteria, dB(A)	$L_{10\ (1\ hour)}$, dB(A)	Compliance
7/F	7F_N09	Dormitory	+28.00	+29.2	70	65	Yes
	7F_N10	Dormitory			70	64	Yes
	7F_N11	Dormitory			70	62	Yes
	7F_N12	Dormitory			70	61	Yes
	7F_N13	Dormitory			70	61	Yes
	7F_N14	Dormitory			70	60	Yes
	7F_N15	Dormitory			70	61	Yes
	7F_N16	Dormitory			70	64	Yes
9/F	9F_N01	Staff Common / Rest Room	+35.20	+36.4	70	65	Yes
	9F_N02	Staff Common / Rest Room			70	65	Yes
	9F_N03	Staff Common / Rest Room			70	65	Yes
	9F_N04	Office			70	65	Yes
	9F_N05	Office			70	65	Yes
	9F_N06	Office			70	64	Yes
	9F_N07	Office			70	63	Yes
	9F_N08	Office			70	62	Yes
	9F_N09	Office			70	61	Yes
	9F_N10	Conference Room			70	61	Yes
	9F_N11	Conference Room			70	61	Yes
	9F_N12	Conference Room			70	64	Yes
	9F_N13	Reception			70	64	Yes
10/F	10F_A1	Residential Unit A	+40.00	+41.2	70	58	Yes
	10F_B1	Residential Unit B			70	55	Yes
	10F_B2	Residential Unit B			70	57	Yes
	10F_B3	Residential Unit B			70	56	Yes
	10F_B4	Residential Unit B			70	58	Yes
	10F_B5	Residential Unit B			70	58	Yes
	10F_C1	Residential Unit C			70	56	Yes
	10F_C2	Residential Unit C			70	56	Yes
	10F_C3	Residential Unit C			70	55	Yes
	10F_D1	Residential Unit D			70	56	Yes
	10F_D2	Residential Unit D			70	56	Yes
	10F_E1	Residential Unit E			70	56	Yes
	10F_E2	Residential Unit E			70	56	Yes
	10F_F1	Residential Unit F			70	57	Yes
	10F_F2	Residential Unit F			70	57	Yes
	10F_G1	Residential Unit G			70	65	Yes
	10F_G2	Residential Unit G			70	65	Yes
	10F_G3	Residential Unit G			70	65	Yes
	10F_G4	Residential Unit G			70	59	Yes
	10F_G5	Residential Unit G			70	57	Yes
	10F_H1	Residential Unit H			70	65	Yes
	10F_H2	Residential Unit H			70	65	Yes
11/F	11F_A1	Residential Unit A	+43.50	+44.7	70	61	Yes
	11F_B1	Residential Unit B			70	61	Yes
	11F_B2	Residential Unit B			70	62	Yes
	11F_B3	Residential Unit B			70	61	Yes
	11F_B4	Residential Unit B			70	62	Yes
	11F_B5	Residential Unit B			70	61	Yes
	11F_C1	Residential Unit C			70	61	Yes
	11F_C2	Residential Unit C			70	61	Yes
	11F_C3	Residential Unit C			70	60	Yes
	11F_D1	Residential Unit D			70	61	Yes
	11F_D2	Residential Unit D			70	61	Yes
	11F_E1	Residential Unit E			70	61	Yes
	11F_E2	Residential Unit E			70	61	Yes
	11F_F1	Residential Unit F			70	62	Yes
	11F_F2	Residential Unit F			70	61	Yes
	11F_G1	Residential Unit G			70	65	Yes
	11F_G2	Residential Unit G			70	65	Yes
	11F_G3	Residential Unit G			70	65	Yes
	11F_G4	Residential Unit G			70	62	Yes
	11F_G5	Residential Unit G			70	62	Yes
	11F_H1	Residential Unit H			70	65	Yes
	11F_H2	Residential Unit H			70	65	Yes
12/F	12F_A1	Residential Unit A	+47.00	+48.2	70	62	Yes
	12F_B1	Residential Unit B			70	62	Yes
	12F_B2	Residential Unit B			70	63	Yes
	12F_B3	Residential Unit B			70	63	Yes
	12F_B4	Residential Unit B			70	63	Yes
	12F_B5	Residential Unit B			70	62	Yes
	12F_C1	Residential Unit C			70	62	Yes

Predicted Road Traffic Noise Levels for AM Peak Hour (Base Case Scenario)

Floor	NAP ID	Description	Floor Height, mPD	Assessment Height, mPD	Noise Criteria, dB(A)	$L_{10\ (1\ hour)}$, dB(A)	Compliance
12/F	12F_C2	Residential Unit C	+47.00	+48.2	70	62	Yes
	12F_C3	Residential Unit C			70	62	Yes
	12F_D1	Residential Unit D			70	62	Yes
	12F_D2	Residential Unit D			70	62	Yes
	12F_E1	Residential Unit E			70	62	Yes
	12F_E2	Residential Unit E			70	62	Yes
12/F	12F_F1	Residential Unit F	+47.00	+48.2	70	62	Yes
	12F_F2	Residential Unit F			70	62	Yes
	12F_G1	Residential Unit G			70	65	Yes
	12F_G2	Residential Unit G			70	65	Yes
	12F_G3	Residential Unit G			70	65	Yes
	12F_G4	Residential Unit G			70	63	Yes
	12F_G5	Residential Unit G			70	63	Yes
	12F_H1	Residential Unit H			70	65	Yes
	12F_H2	Residential Unit H			70	65	Yes
13/F	13F_A1	Residential Unit A	+50.50	+51.7	70	63	Yes
	13F_B1	Residential Unit B			70	62	Yes
	13F_B2	Residential Unit B			70	64	Yes
	13F_B3	Residential Unit B			70	64	Yes
	13F_B4	Residential Unit B			70	64	Yes
	13F_B5	Residential Unit B			70	63	Yes
	13F_C1	Residential Unit C			70	62	Yes
	13F_C2	Residential Unit C			70	62	Yes
	13F_C3	Residential Unit C			70	62	Yes
	13F_D1	Residential Unit D			70	63	Yes
	13F_D2	Residential Unit D			70	62	Yes
	13F_E1	Residential Unit E			70	63	Yes
	13F_E2	Residential Unit E			70	63	Yes
	13F_F1	Residential Unit F			70	63	Yes
	13F_F2	Residential Unit F			70	63	Yes
	13F_G1	Residential Unit G			70	65	Yes
	13F_G2	Residential Unit G			70	65	Yes
	13F_G3	Residential Unit G			70	65	Yes
	13F_G4	Residential Unit G			70	64	Yes
	13F_G5	Residential Unit G			70	63	Yes
	13F_H1	Residential Unit H			70	65	Yes
	13F_H2	Residential Unit H			70	65	Yes
14/F	14F_A1	Residential Unit A	+54.00	+55.2	70	63	Yes
	14F_B1	Residential Unit B			70	63	Yes
	14F_B2	Residential Unit B			70	65	Yes
	14F_B3	Residential Unit B			70	64	Yes
	14F_B4	Residential Unit B			70	65	Yes
	14F_B5	Residential Unit B			70	64	Yes
	14F_C1	Residential Unit C			70	63	Yes
	14F_C2	Residential Unit C			70	63	Yes
	14F_C3	Residential Unit C			70	63	Yes
	14F_D1	Residential Unit D			70	63	Yes
	14F_D2	Residential Unit D			70	63	Yes
	14F_E1	Residential Unit E			70	63	Yes
	14F_E2	Residential Unit E			70	63	Yes
	14F_F1	Residential Unit F			70	64	Yes
	14F_F2	Residential Unit F			70	63	Yes
	14F_G1	Residential Unit G			70	65	Yes
	14F_G2	Residential Unit G			70	65	Yes
	14F_G3	Residential Unit G			70	65	Yes
	14F_G4	Residential Unit G			70	64	Yes
	14F_G5	Residential Unit G			70	64	Yes
	14F_H1	Residential Unit H			70	65	Yes
	14F_H2	Residential Unit H			70	65	Yes
15/F	15F_A1	Residential Unit A	+57.50	+58.7	70	64	Yes
	15F_B1	Residential Unit B			70	63	Yes
	15F_B2	Residential Unit B			70	65	Yes
	15F_B3	Residential Unit B			70	65	Yes
	15F_B4	Residential Unit B			70	65	Yes
	15F_B5	Residential Unit B			70	64	Yes
	15F_C1	Residential Unit C			70	63	Yes
	15F_C2	Residential Unit C			70	63	Yes
	15F_C3	Residential Unit C			70	64	Yes
	15F_D1	Residential Unit D			70	63	Yes
	15F_D2	Residential Unit D			70	63	Yes
	15F_E1	Residential Unit E			70	64	Yes
	15F_E2	Residential Unit E			70	64	Yes

Predicted Road Traffic Noise Levels for AM Peak Hour (Base Case Scenario)

Floor	NAP ID	Description	Floor Height, mPD	Assessment Height, mPD	Noise Criteria, dB(A)	$L_{10\ (1\ hour)}$, dB(A)	Compliance
15/F	15F_F1	Residential Unit F	+57.50	+58.7	70	64	Yes
	15F_F2	Residential Unit F			70	64	Yes
	15F_G1	Residential Unit G			70	65	Yes
	15F_G2	Residential Unit G			70	65	Yes
	15F_G3	Residential Unit G			70	65	Yes
	15F_G4	Residential Unit G			70	64	Yes
	15F_G5	Residential Unit G			70	64	Yes
	15F_H1	Residential Unit H			70	65	Yes
	15F_H2	Residential Unit H			70	65	Yes
16/F	16F_A1	Residential Unit A	+61.00	+62.2	70	64	Yes
	16F_B1	Residential Unit B			70	64	Yes
	16F_B2	Residential Unit B			70	66	Yes
	16F_B3	Residential Unit B			70	65	Yes
	16F_B4	Residential Unit B			70	66	Yes
	16F_B5	Residential Unit B			70	65	Yes
16/F	16F_C1	Residential Unit C	+61.00	+62.2	70	64	Yes
	16F_C2	Residential Unit C			70	64	Yes
	16F_C3	Residential Unit C			70	64	Yes
	16F_D1	Residential Unit D			70	64	Yes
	16F_D2	Residential Unit D			70	64	Yes
	16F_E1	Residential Unit E			70	64	Yes
	16F_E2	Residential Unit E			70	64	Yes
	16F_F1	Residential Unit F			70	64	Yes
	16F_F2	Residential Unit F			70	64	Yes
	16F_G1	Residential Unit G			70	65	Yes
	16F_G2	Residential Unit G			70	65	Yes
	16F_G3	Residential Unit G			70	65	Yes
	16F_G4	Residential Unit G			70	64	Yes
	16F_G5	Residential Unit G			70	64	Yes
	16F_H1	Residential Unit H			70	65	Yes
	16F_H2	Residential Unit H			70	65	Yes
17/F	17F_A1	Residential Unit A	+64.50	+65.7	70	64	Yes
	17F_B1	Residential Unit B			70	64	Yes
	17F_B2	Residential Unit B			70	66	Yes
	17F_B3	Residential Unit B			70	66	Yes
	17F_B4	Residential Unit B			70	66	Yes
	17F_B5	Residential Unit B			70	65	Yes
	17F_C1	Residential Unit C			70	64	Yes
	17F_C2	Residential Unit C			70	64	Yes
	17F_C3	Residential Unit C			70	65	Yes
	17F_D1	Residential Unit D			70	64	Yes
	17F_D2	Residential Unit D			70	64	Yes
	17F_E1	Residential Unit E			70	64	Yes
	17F_E2	Residential Unit E			70	64	Yes
	17F_F1	Residential Unit F			70	64	Yes
	17F_F2	Residential Unit F			70	64	Yes
	17F_G1	Residential Unit G			70	65	Yes
	17F_G2	Residential Unit G			70	65	Yes
	17F_G3	Residential Unit G			70	66	Yes
	17F_G4	Residential Unit G			70	64	Yes
	17F_G5	Residential Unit G			70	64	Yes
	17F_H1	Residential Unit H			70	66	Yes
	17F_H2	Residential Unit H			70	65	Yes
18/F	18F_A1	Residential Unit A	+70.10	+71.3	70	60	Yes
	18F_A2	Residential Unit A			70	63	Yes
	18F_A3	Residential Unit A			70	65	Yes
	18F_A4	Residential Unit A			70	65	Yes
	18F_B1	Residential Unit B			70	64	Yes
	18F_B2	Residential Unit B			70	65	Yes
	18F_B3	Residential Unit B			70	62	Yes
	18F_B4	Residential Unit B			70	60	Yes
	18F_C1	Residential Unit C			70	64	Yes
	18F_C2	Residential Unit C			70	64	Yes
	18F_D1	Residential Unit D			70	57	Yes
	18F_D2	Residential Unit D			70	65	Yes
	18F_D3	Residential Unit D			70	65	Yes
	18F_D4	Residential Unit D			70	66	Yes
	18F_D5	Residential Unit D			70	65	Yes
	18F_D6	Residential Unit D			70	64	Yes
19/F	19F_A1	Residential Unit A	+73.60	+74.8	70	65	Yes
	19F_A2	Residential Unit A			70	66	Yes
	19F_A3	Residential Unit A			70	65	Yes

Predicted Road Traffic Noise Levels for AM Peak Hour (Base Case Scenario)

Floor	NAP ID	Description	Floor Height, mPD	Assessment Height, mPD	Noise Criteria, dB(A)	$L_{10\ (1\ hour)}$, dB(A)	Compliance
19/F	19F_A4	Residential Unit A	+73.60	+74.8	70	66	Yes
	19F_B1	Residential Unit B			70	65	Yes
	19F_B2	Residential Unit B			70	65	Yes
	19F_B3	Residential Unit B			70	65	Yes
	19F_B4	Residential Unit B			70	65	Yes
	19F_C1	Residential Unit C			70	65	Yes
	19F_C2	Residential Unit C			70	65	Yes
	19F_D1	Residential Unit D			70	62	Yes
	19F_D2	Residential Unit D			70	65	Yes
	19F_D3	Residential Unit D			70	65	Yes
	19F_D4	Residential Unit D			70	66	Yes
	19F_D5	Residential Unit D			70	65	Yes
	19F_D6	Residential Unit D			70	65	Yes

Results Summary	
Total No. of NAPs	301
Total No. of NAPs with exceedance	0
Compliance Rate	100%