

Section 12A Application for Proposed Rezoning from “Government, Institution or Community” to “Government, Institution or Community (6)” at Tuen Mun, New Territories and to Amend the Notes of the Zone Applicable to the Site for the Proposed Social Welfare Facility (Residential Care Home for the Elderly) at Section C of Lot No. 496 in D.D 132 and the adjoining Government Land, Tuen Mun, New Territories

Environmental Assessment Report

Reference: P166-EA-I1 Issue 1

Date: 16 June 2026

Confidential



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1 Introduction

1.1 Background

The Applicant intends to develop a Residential Care Home for the Elderly (RCHE) at Lot No. 496 S.C in D.D. 132 and the adjoining Government Land, Tuen Mun (hereafter as “the Site”). The Site falls within an area zoned “Government, Institution or Community” (“G/IC”) under the Approved Tuen Mun Outline Zoning Plan (No. S/TM/41).

Urban Green Consultants Ltd. (UGC) has been commissioned to conduct an Environmental Assessment (EA) to assess the potential environmental impact on the Proposed Development.

1.2 Objectives of the EA

This EA has identified and addressed the following major environmental issues:

- Identify the sensitive uses that will likely be affected by the operation of the Site;
- Assess and evaluate the potential noise impacts due to site operation upon the sensitive uses;
- Assess and evaluate the potential air quality impacts upon the sensitive users; and
- Propose mitigation measures, where necessary, to reduce the environmental impacts to an acceptable level.

1.3 Report Structure

The remaining chapters of this report are shown below:

Chapter 2 – Site Context

Chapter 3 – Air Quality

Chapter 4 – Noise

Chapter 5 – Water Quality

Chapter 6 – Waste Management

Chapter 7 - Land Contamination

Chapter 8 – Conclusion

2 Site Context

2.1 Site Location and Its Environs

The Site is located on Tuen Fu Road within the Tuen Mun District. It is mainly bounded by residential uses, including the Tuen Fu Road Disciplined Services Quarters to the south, village housing to the west, the Ching Leung Nunnery to the north, and Gig Lok Monastery to the east.

Furthermore, two railway viaducts are located to the southwest of the Site, including the Tuen Ma Line and the Light Rail routes.

Figure 2.1 shows the Site location and its environs.

2.2 Proposed Development

The Proposed Development comprises 13 storeys, with a GFA of approximately 12,000 m². Table 2.1 summarise the development parameters.

Table 2.1 Development Parameters

Development Parameters	
Site Area	1,770 m ²
Gross Floor Area	Not more than 12,000 m ²
Zoning under OZP	Government, Institution or Community (G/IC)
No. of Block	1
Maximum Building Height (in storey)	13
Maximum Building Height (in mPD)	Not more than 52 mPD
No. of Rooms	252
No. of Beds	504
Expected Completion Year	2032
Use	G/F: Lobby and Carpark 2/F – 7/F: RCHE 8/F: Refuge Floor 9/F – 13/F: RCHE

The operation year of the Proposed Development is expected to be Year 2032. The proposed layout plan is presented in Appendix A.

3 Air Quality

3.1 Introduction

This section aims to assess the air quality impact associated with all relevant emission sources arising from the surrounding environment upon the Proposed Development and the potential air quality impact arising from the Proposed Development to nearby ASRs.

3.2 Statutory Requirements and Guidelines

Chapter 9 of the HKPSG stipulates the AQOs issued under the APCO. An updated AQOs was in force on 11 April 2025 and the relevant criteria for this assessment are tabulated in [Table 3.1](#).

Table 3.1 Hong Kong Air Quality Objectives

Pollutant	Averaging time	Concentration limit [i] ug/m ³	No. of exceedances allowed
Sulphur dioxide (SO ₂)	10-minute	500	3
	24-hour	40	3
Respirable suspended particulates (PM ₁₀) [ii]	24-hour	75	9
	Annual	30	Not applicable
Fine suspended particulates (PM _{2.5}) [iii]	24-hour	37.5	18
	Annual	15	Not applicable
Nitrogen dioxide (NO ₂)	1-hour	200	18
	24-hour	120	9
	Annual	40	Not applicable
Ozone (O ₃)	8-hour	160	9
	Peak season	100	Not applicable

Pollutant	Averaging time	Concentration limit [i] ug/m ³	No. of exceedances allowed
Carbon monoxide (CO)	1-hour	30,000	0
	24-hour	10,000	0
	Annual	4,000	0
Lead	Annual	0.5	Not applicable

Note:

- All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.
- Respirable suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.
- Fine suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

The minimum buffer distance required between roads and air sensitive uses and chimneys are stipulated in Table 3.1 in Chapter 9 of the HKPSG. The relevant minimum buffer distances are summarised in Table 3.2 and Table 3.3.

Table 3.2 Relevant Buffer Distance Requirements for Road

Type of Road	Buffer Distance ^[1]
Trunk Road and Primary Distributor	>20m
District Distributor	>10m
Local Road	>5m

Note:

[1] Buffer distance is the horizontal distance from the edge of road kerb and the Site boundary.

Table 3.3 Relevant Buffer Distance Requirements for Chimney

Difference in Height between Industrial Chimney Exit and the Site	Buffer Distance
<20m	>200m
20-30m	>100m
30-40m	>50m
40m	>10m

The relevant regulations specified by APCO include the followings:

- Air Pollution Control Ordinance (Cap. 311);
- Air Pollution Control (Construction Dust) Regulation (Cap. 311R);

- Air Pollution Control (Smoke) Regulation (Cap. 311C);
- Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (Cap. 311Z);
- Air Pollution Control (Fuel Restriction) Regulations (i.e. using liquid fuel with a sulphur content of less than 0.001% by weight); and
- Recommended Pollution Control Clauses for Construction Contracts

3.3 Baseline Air Quality

As there is no EPD's monitoring station located in the vicinity of the Site, the nearest general monitoring station, Tuen Mun Air Quality Monitoring Station (AQMS) which is approximately 2.05 km from the Site is selected. The monitoring concentrations between 2020 and 2024 are summarised in [Table 3.4](#).

Table 3.4 Air Quality Monitoring Concentration ($\mu\text{g}/\text{m}^3$) at Tuen Mun AQMS (Years 2020 to 2024)

Pollutant	Averaging Period	2020	2021	2022	2023	2024	5-year Average	Concentration Limit ($\mu\text{g}/\text{m}^3$)
SO ₂	10-min (4 th highest)	98	22	29	23	18	38	500
	24-hr (4 th highest)	10	9	11	7	9	9	40
PM ₁₀	24-hr (10 th highest)	<u>84</u>	<u>87</u>	65	<u>76</u>	<u>76</u>	<u>78</u>	75
	Annual	<u>34</u>	<u>36</u>	<u>32</u>	<u>34</u>	<u>34</u>	<u>34</u>	30
PM _{2.5}	24-hr (19 th highest)	<u>41</u>	<u>42</u>	<u>39</u>	<u>38</u>	<u>43</u>	<u>41</u>	37.5
	Annual	<u>20</u>	<u>19</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>19</u>	15
NO ₂	1-hr (19 th highest)	166	172	128	160	144	154	200
	24-hr (10 th Highest)	80	92	71	85	75	81	120
	Annual	40	<u>44</u>	39	40	40	<u>41</u>	40
O ₃	8-hr (10 th highest)	<u>166</u>	<u>161</u>	<u>195</u>	155	<u>173</u>	<u>170</u>	160
	Peak season	88	82	91	84	92	87	100
CO	1-hr	1650	1720	1480	1370	1470	1538	30,000
	8-hr	1513	1450	1345	1143	1424	1375	10,000
	24-hr	1105	1205	1090	973	1115	1097	4,000

Note:

[1] **Bolded and underlined value indicates the exceedance of the AQO.**

[2] The air quality monitoring concentration at Tuen Mun AQMS is obtained from <https://aqia.epd.gov.hk/>

Data collected by Environmental Protection Department (EPD) air quality monitoring programme during the period of 2020 to 2024 were examined with average period value presented in Table 3.4. The table shows that the concentration of PM_{2.5}, PM₁₀, NO₂ and O₃ exceed the AQOs. Generally, the overall air quality has been improved over the period of 2020 to 2024.

3.4 Future Air Quality

Future background air quality has been predicted based on hourly concentration data extracted from the “Pollutants in the Atmosphere and their Transport over Hong Kong” (PATH v3.0) model. The operation year of the project is in Year 2032. The best available data from PATH v3.0 will be the projected background scenario in Year 2030. Pollutant concentrations in PATH grid (20,43) and (21,43) projected to Year 2030 were extracted and summarized in Table 3.5.

Table 3.5 Background Air Pollutants in Year 2030 Extracted from PATH V3.0

Pollutant	Averaging Period	Path Grid Concentration (µg/m ³)		Concentration Limit (µg/m ³)
		(20,43)	(21,43)	
SO ₂	10-min (4 th highest)	25.75	25.07	500
	24-hr (4 th highest)	7.16	6.76	40
PM ₁₀	24-hr (10 th highest)	51.53	50.01	75
	Annual	19.58	19.26	30
PM _{2.5}	24-hr (19 th highest)	30.16	29.63	37.5
	Annual	12.23	11.83	15
NO ₂	1-hr (19 th highest)	84.77	79.41	200
	24-hr (10 th Highest)	35.54	30.94	120
	Annual	20.58	16.74	40
O ₃	8-hr (10 th highest)	<u>181.32</u>	<u>180.62</u>	160
	Peak season	<u>116.45</u>	<u>115.75</u>	100
CO	1-hr	533.84	528.9	30,000

Pollutant	Averaging Period	Path Grid Concentration ($\mu\text{g}/\text{m}^3$)		Concentration Limit ($\mu\text{g}/\text{m}^3$)
		(20,43)	(21,43)	
	8-hr	486.04	482.72	10,000
	24-hr	465.19	455.15	4,000

Note:

[1] The values of Year 2030, L1 are obtained from <https://aqia.epd.gov.hk/>

[2] Bolded and underlined value indicates the exceedance of the AQO.

Exceedance of AQOs of O_3 is predicted based on the PATH background concentrations in Year 2030. The high concentration of O_3 is a regional air pollution problem in the Pearl River Delta (PRD) Region. However, all other parameters have complied with the AQOs.

3.5 Air Sensitive Receivers

A site inspection is conducted on 27 March 2026 to identify the air sensitive receivers (ASRs) within 500m from the site boundary. ASRs include residential buildings and religious institutions. The representative ASRs were shown in Figure 3.1 and summarised in Table 3.6. The photo record of the site inspection is provided in Appendix B1.

In addition to the surrounding ASRs, the Proposed Development is a residential building which is considered as ASR.

Table 3.6 Representative Air Sensitive Receivers (ASRs)

ID	Description	Use	Shortest Horizontal Distance from Site Boundary (m)	Assessment Height (mAG)
Existing ASRs				
ASR 1	Tuen Fu Road Disciplined Services Quarters	Residential	15	1.5, 5, 10, 20, 50 and 70
ASR 2	Tuen Mun Treatment Works Staff Quarters	Residential	34	1.5, 5 and 10
ASR 3	Gig Lok Monastery	Religious Institution	66	1.5 and 5
ASR 4	Parkland Villas	Residential	105	1.5, 5, 10, 20, 50 and 80
ASR 5	Ching Leung Nunnery	Religious Institution	23	1.5, 5 and 10
ASR 6	Village House (1)	Residential	45	1.5 and 5
ASR 7	Village House (2)	Residential	31	1.5 and 5
ASR 8	Village House (3)	Residential	19	1.5 and 5

3.6 Air Quality during Construction Phase

The major air pollution concerns shall be fugitive dust and smoke emission during the construction stage, especially excavation works. It is estimated that the area of excavation is about 428m² and the volume of the excavation materials is about 642m³. Approximately 128 m³ of the excavation waste will be reused as backfilling materials on-site while the remaining 514 m³ will be delivered to Tuen Mun 38 fill bank if it is available at the time of construction.

A bulk factor of 1.4 has been applied to account for the increase in volume of excavated materials in loose form. The loose volume for disposal is therefore estimated to be 720m³ (514m³ x 1.4 = 720m³). Given a dump truck capacity of 7.5 m³, approximately 96 dump truck trips would be required throughout the construction period.

Mechanical equipment and dump trucks are essential for construction activities. However, as the project is currently at the preliminary design stage, the quantity of mechanical equipment and the extent of their operation are subject to change depending on site conditions during construction stage. [Table 3.7](#) presents a preliminary estimate of the quantity of dump trucks and mechanical equipment required.

Table 3.7 Estimated Quantity of Dump Trucks and Mechanical Equipment.

Equipment	Quantity
Stage 1 – Hoarding	
Concrete crusher mini-robot mounted	1
Bulldozer, tracked	1
Dump truck (≤38 tonnes)	1
Stage 2 – Piling	
Rotary bored piling – cast in situ (Crane mounted auger)	1
Wheeled mobile crane	1
Air compressor (≤10 m ³ /min)	2
Stage 3 – Excavation & Pile Cap	
Wheeled mobile crane	1
Excavator, wheeled/tracked	1
Bar bender and cutter (electric)	1
Compactor, vibratory	1
Large lorry concrete mixer	1

Equipment	Quantity
Dump truck (≤ 38 tonnes)	2
Stage 4 – Superstructure	
Wheeled mobile crane	1
Bar bender and cutter (electric)	1
Compactor, vibratory	1
Large lorry concrete mixer	1
Dump truck (≤ 38 tonnes)	2
Lorry (≤ 38 tonnes)	1

The construction of the Proposed Development shall comply with the guidelines listed below:

- Construction dust shall be controlled in accordance with the requirements as listed in the Schedule of the Air Pollution Control (Construction Dust) Regulation of APCO. Also, notice of notifiable works as defined under the Regulation shall be completed by the Contractor and sent to the Environmental Protection Department (EPD).
- Dark smoke emission of the machines used for construction shall comply with the requirements of the Air Pollution Control (Smoke) Regulation of APCO.
- All of the Non-road Mobile Machinery (NRMMS) used for the construction shall comply with the Air Pollution Control (NRMMS) (Emission) Regulation.

To mitigate fugitive dust impact, all dust control measures recommended in the Air Pollution Control (Construction Dust) Regulation, where applicable, will be implemented. Typical relevant dust control measures include:

- The works area for site clearance shall be sprayed with water before, during and after the operation so as to maintain the entire surface wet;
- Restricting heights from which materials are to be dropped, as far as practicable to minimise the fugitive dust arising from unloading/ loading;
- Immediately before leaving a construction site, all vehicles shall be washed to remove any dusty materials from its body and wheels;
- All spraying of materials and surfaces should avoid excessive water usage;
- Where a vehicle leaving a construction site is carrying a load of dusty materials, the load shall be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle;
- Travelling speeds should be controlled to reduce traffic induced dust dispersion and re-suspension within the Site from the operating haul trucks;
- Erection of hoarding of not less than 2.4 m high from ground level along the Site boundary;
- Any stockpile of dusty materials shall be covered entirely by impervious

sheeting; and/or placed in an area sheltered on the top and 4 sides; and

- All dusty materials shall be sprayed with water immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.
- Adopt a higher hoarding height close to those concerned ASRs.
- Locate the haul road away from those concerned ASRs.
- Avoid dusty works or placing stockpile near those concerned ASRs
- Minimization of unpaved, exposed earth by immediate covering/ permanent paving as soon as the works have been completed.
- Provide electric power supply for on-site machinery as far as practicable and dieselfueled generators and machinery shall be avoided to minimize the gaseous and PM emissions.
- Avoid using exempted NRMMS.

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

3.7 Air Quality during Operational Phase

3.7.1 Vehicular Emission Impact on the Proposed Development

Vehicular Emission from the surrounding roads is considered a potential source of air quality impact for the Proposed Development. The nearest vehicular roads to the Site are Tuen Fu Road, Castle Peak Road - Lingnan and Tuen Mun Road. According to the Annual Traffic Census 2024 published by the Transport Department (TD), Castle Peak Road - Lingnan and Tuen Mun Road are classified as a district distributor and an urban trunk road, respectively. As advised by the traffic consultant, Tuen Fu Road is considered a local road. Agreement from the TD on the proposed road classification is currently pending. In the meantime, Tuen Fu Road is assumed to be a local road as a conservative approach.

In accordance with the buffer distance requirements for district distributors, urban trunk roads, and local road, buffer zones of 10m, 20m and 5m from the respective roads are required.

As no air-sensitive uses, including openable windows, fresh air intakes, or recreational open spaces are located within the required buffer zones, the requirement of buffer distances stipulated in Table 3.1 of Chapter 9 of the Hong Kong Planning Standards and Guidelines (HKPSG) for the Proposed Development are complied. Hence, no adverse air quality impacts associated with vehicular emissions on the Proposed Development are anticipated.

The required buffer distances from the relevant roads are provided in [Figure 3.2](#) and summarised in [Table 3.8](#).

Table 3.8 Summary of Required Road Buffer Distance

Road	Road Type	Required Buffer Distance	Provided Buffer Distance (From road kerb to the building boundary)
Tuen Fu Road	Local Road	>5m	5m
Castle Peak Road - Lingnan	District Distributor	>10m	76m
Tuen Mun Road	Urban Trunk Road	>20m	84m

3.7.2 Chimney Emission

Chimney Emission in the Surroundings

Based on the site survey conducted on 12 November 2025, no chimney was identified within 200m from the site boundary. In Gig Lok Monastery and Ching Leung Nunnery, no chimneys or smoke emitting activities are observed. Therefore, no adverse air quality impact arising from chimney emission is anticipated.

Chimney Emission at the Proposed Development

There will be no chimney at the Proposed Development. Therefore, no adverse air quality impact arising from chimney emission is anticipated.

3.7.3 Carpark Emission at the Proposed Development.

A car park is proposed at ground level within the Proposed Development. As the car park will be enclosed within the building structure, vehicular emissions will be contained, thereby avoiding direct dispersion at ground level. While the operation of the car park may generate pollutants such as Carbon Monoxide and Nitrogen Dioxide, both the design and operation will comply with the requirements of ProPECC PN 2/96 "Control of Air Pollution in Car Parks" to minimize potential air quality impacts on nearby ASRs.

A mechanical ventilation system will be provided to ensure adequate air exchange and effective dilution of pollutants within the car park. Exhaust air will be discharged through exhaust outlets located as far away as practicable from the nearest ASRs. The locations of the exhaust outlets are illustrated in [Figure 3.3](#).

With the implementation of the above design measures and full compliance with relevant guidelines, no adverse air quality impact arising from the proposed car park is anticipated.

3.7.4 Utility Facilities in the Surrounding

Tuen Mun Water Treatment Works and Tuen Mun North Offtake and Pigging Station are located within the 500m assessment area of the Proposed Development.

The Tuen Mun Water Treatment Works employs conventional potable water treatment processes, including coagulation, sedimentation, filtration and disinfection, which are physical and chemical processes conducted within enclosed or controlled units, in accordance with the information from the Water Supplies Department (WSD) website. These processes do not involve biological decomposition or sludge digestion that would typically generate odour emissions. An enquiry has been made to the Water Supplies Department (WSD) regarding potential air pollutant and odour emission sources from the Tuen Mun Water Treatment Works, and a response is currently pending. The enquiry email is provided in [Appendix B2](#). Based on the design and operation of the conventional treatment processes, no adverse odour or air quality impact is anticipated.

The Tuen Mun North Offtake and Pigging Station comprise gas transmission infrastructure, including pipelines, valves and pressure regulating equipment, which are operated as a closed system. Based on site observations on 12 November 2025 and 27 March 2026, the facility does not involve fuel combustion or continuous venting activities, and no odour sources were identified. Given the nature of its operation, it is not expected to be a source of air pollutants or odorous emissions. The photo record for the site observation is provided in [Appendix B1](#).

In view of the above, no air quality impact or odorous emissions are anticipated from the nearby utility facilities.

3.7.5 Temples and Columbarium Use in the Surroundings

Ching Leung Nunnery and Gig Lok Monastery are located to the northwest and northeast of the Site, respectively. Site inspections were conducted on 12 November 2025 and 27 March 2026 to assess potential air quality impacts arising from temple and columbarium uses in the surrounding area. Photo records of the site inspection are provided in [Appendix B1](#).

Based on site observations, a portion of the Ching Leung Nunnery has been occupied by a non-governmental organization for educational purposes. Other parts of the nunnery comprise village-type housing for residential use, as well as a dining area for worshippers to partake in vegetarian meals on special occasions. A Buddhist Hall for worship and prayer was also observed. According to information provided by the hall staff and site observations, no burning of joss paper is carried out within the Buddhist Hall.

For Gig Lok Monastery, based on the planning application A/TM/419 and site observations, the monastery primarily serves as a columbarium, a place of worship, and dormitory for staff. According to information provided by the staff and the EPD's comments on the planning application, no burning of joss paper is permitted within the monastery. The extract of the EPD's comments on the planning application is provided in [Appendix B3](#).

As no air pollutant emission sources were identified from the surrounding temples and columbarium, no adverse air quality impact is anticipated from these uses.

4 Noise

4.1 Introduction

This section addresses the potential noise impacts on the Proposed Development and the noise impacts arising from Proposed Development on adjacent sensitive uses. The relevant statutory requirements and mitigation measures recommended in order to comply with the associated criteria and standards are presented in this section.

4.2 Criteria and Guidelines

The Noise Control Ordinance (NCO) provides the statutory framework for noise control. Assessment procedures and standards relevant to the Project are set out in the Technical Memoranda (TM) and guidelines listed below:

- Chapter 9, Environment – Hong Kong Planning Standards and Guidelines (HKPSG)
- Practice Note for Professional Persons No. ProPECC PN No. 3/23 “Application of Sound Insulation in Residential Building to Reduce Noise Transmission Between Units”
- Practice Note for Professional Persons No. ProPECC PN No. 4/23 “Practice Note for the Planning of Residential Developments against Road Traffic Noise”
- Practice Note for Professional Persons No. ProPECC PN No. 5/23 “Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact”;
- Practice Note for Professional Persons No. ProPECC PN No. 1/24 “Minimizing Noise from Construction Activities”;
- Noise Control Ordinance (NCO) (Cap. 400);
- 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); and
- Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM).
- Recommended Pollution Control Clause for Construction Contracts

4.3 Representative Noise Sensitive Receivers

Representative NSRs located within 300m of the assessment area from the Site have been identified and provided in Table 4.1, with their locations shown in Figure 4.1. As the Proposed Development involves the development of a RCHE with openable windows, it is considered as an NSR.

The representative NSRs are surrounded by Tuen Mun Road and Castle Peak Road – Lingnan. According to “*The Annual Traffic Census 2024*” issued by TD, the annual average daily traffic flow on Tuen Mun Road exceeds 30,000 vehicles, while the traffic flows on Castle Peak Road – Lingnan is below 30,000 vehicles.

Given that noise enclosure is provided at Tuen Mun Road, it is considered as indirectly affected by IF. For Castle Peak Road – Lingnan, it is not considered as IF.

To determine the Area Sensitivity Ratings (ASRs) of the representative NSRs and the Proposed Development, both the “type of area containing NSR” and the “degree to which NSR is affected by IF” have been taken into account. Table 4.2 summarise the determination of ASR of the representative NSRs and the Proposed Development.

Table 4.1 Representative Noise Sensitive Receivers

ID	Location	Type	Horizontal Separation from the Site Boundary, m
NSR 1	Tuen Fu Road Disciplined Services Quarters	Residential	15
NSR 2	Tuen Mun Treatment Works Staff Quarters	Residential	34
NSR 3	Gig Lok Monastery	Religious Institution	66
NSR 4	Parkland Villas	Residential	105
NSR 5	Ching Leung Nunnery	Religious Institution	23
NSR 6	Village House (1)	Residential	45
NSR 7	Village House (2)	Residential	31
NSR 8	Village House (3)	Residential	19

Table 4.2 Summary of the determination of ASR

Representative NSRs	Type of area containing NSR	Is IF located within the 100m boundary? (Y/N)	Degree to which NSR is affected by IF	ASRs
NSR 1 Tuen Fu Road Disciplined Services Quarters	(ii) Low density residential area consisting of low-rise or isolated high-rise developments	Y	Indirectly affected	B
NSR 2 Tuen Mun Treatment Works Staff Quarters	(ii) Low density residential area consisting of low-rise or isolated high-rise developments	N	Not affected	A
NSR 3 Gig Lok Monastery	(ii) Low density residential area consisting of low-rise or isolated high-rise developments	N	Not affected	A
NSR 4 Parkland Villas	(ii) Low density residential area consisting of low-rise or isolated high-rise developments	Y	Indirectly affected	B
NSR 5 Ching Leung Nunnery	(ii) Low density residential area consisting of low-rise or isolated high-rise developments	Y	Indirectly affected	B
NSR 6 Village House (1)	(ii) Low density residential area consisting of low-rise or isolated high-rise developments	Y	Indirectly affected	B
NSR 7 Village House (2)	(ii) Low density residential area consisting of low-rise or isolated high-rise developments	Y	Indirectly affected	B
NSR 8 Village House (3)	(ii) Low density residential area consisting of low-rise or isolated high-rise developments	Y	Indirectly affected	B
The Proposed Development	(ii) Low density residential area consisting of low-rise or isolated high-rise developments	Y	Indirectly affected	B

4.3.1**Prevailing Background Noise Level**

Noise survey was conducted on 11 and 12 December 2025 to obtain the prevailing background noise level during daytime, evening time and nighttime. The measurement was taken at 1.2m above the ground level. LAeq 30 minutes were recorded, and monitoring locations are shown in [Figure 4.1](#). The measured prevailing noise levels and established noise standard to be complied with according to IND-TM for fixed plant sources are summarised in [Table 4.3](#) and. Details of the noise survey are provided in [Appendix C1](#).

Table 4.3 Summary of Prevailing Background Noise Measurement

ID	Measured Background Noise Level, $L_{Aeq30min}$, dB(A)		
	Day Time	Evening Time	Night Time
P1	62.2	59.5	54.2
P2	67.3	63.7	56.7
P3	61.0	63.2	56.1
P4	63.8	61.2	54.8

Note:

[1] +3dB free field correction is applied to all measurement points.

Table 4.4 Summary of Adopted Noise Standard

NSR ID	Location	Measured Background Noise Level, L _{Aeq30min} , dB(A)			IND-TM Noise Standard for Planned Fixed Noise Source, [ANL-5dB(A)],dB(A)			Adopted Criteria		
		Day Time	Evening Time	Night Time	Day Time	Evening Time	Night Time	Day Time	Evening Time	Night Time
NSR 1	Tuen Fu Road Disciplined Services Quarters	67.3	63.7	56.7	60	60	50	60	60	50
NSR 2	Tuen Mun Treatment Works Staff Quarters	67.3	63.7	56.7	55	55	45	55	55	45
NSR 3	Gig Lok Monastery	62.2	59.5	54.2	55	55	45	55	55	45
NSR 4	Parkland Villas	63.8	61.2	54.8	60	60	50	60	60	50
NSR 5	Ching Leung Nunnery	62.2	59.5	54.2	60	60	50	60	60	50
NSR 6	Village House (1)	61	63.2	56.1	60	60	50	60	60	50
NSR 7	Village House (2)	61	63.2	56.1	60	60	50	60	60	50
NSR 8	Village House (3)	61	63.2	56.1	60	60	50	60	60	50

Note:

[1] +3dB free field correction is applied to all measurement points

4.4 Noise Impact During Construction Phase

There is no statutory control of daytime (07:00 – 19:00) construction noise and general construction work (except percussive piling) on normal weekdays. Any maintenance work in connection with the proposed construction work is also considered as construction work under the NCO and should also be conducted within this time period.

Noise impact arising from general construction activities conducted during restricted hours (07:00 – 19:00 on any day and any time on Sunday or general holiday) are governed by the NCO. A Construction Noise Permit (CNP) should be applied if there are any construction activities during restricted hours and percussive piling at any time. Construction noise from the Proposed Development will be minimised as far as practicable and strictly complied with the noise criteria stipulated in ProPECC PN1/24. [Table 4.5](#) summarises the non-statutory control on construction noise.

Table 4.5 Non-statutory Control on Construction Noise during Non-Restricted Hours

Noise Sensitive Receivers	Leq(30min), dB(A)
All domestic premises Temporary housing accommodation Hostels Convalescences homes Homes for aged	75
Places of public worship Courts of law Hospitals and medical clinics	70
Educational institutions (including kindergartens and nurseries)	70 (65 during examinations)

The proposed works will be conducted within the Site with temporary noise barriers erected for screening noise sources from construction plants. To further eliminate the construction noise, the following mitigation measures should be implemented where applicable:

- Selecting quieter powered mechanical equipment (PME) to reduce noise generated from construction activities
- Placing PME as far from NSRs as possible and direct away from NSRs
- Maintaining good site practices, including the avoidance of parallel use of multiple PME

The feasibility of adopting other quieter construction method such as non-explosive chemical expansion agent, silent piling by press-in method, bursting system, listed in the EPD website will also be considered.

To ensure the above mitigation measures will be implemented properly, the contractor shall prepare a Construction Noise Monitoring Plan (CNMP). Furthermore,

the construction contract shall also include “Recommended Pollution Control Clause for Construction Contracts” issued by EPD and specify the construction method and quiet construction equipment that will be used during construction.

As such, adverse construction noise impact on the nearby NSRs during construction phase is not anticipated.

4.5 Noise Impact During Operation Phase

4.5.1 Road Traffic Noise

4.5.1.1 Assessment Criteria

Noise standards are stipulated in Chapter 9 of the Hong Kong Planning Standards and Guidelines (HKPSG) for planning against possible noise impact from road traffic. According to the HKPSG, the road traffic noise standard of L10(1-hour) 70 dB(A) for the use of “All domestic premises including temporary housing accommodation” should be followed.

4.5.1.2 Assessment Points

All representative noise sensitive receivers (NSRs) within the Proposed Development are assigned with an assessment point. In general, the assessment points are assumed to be at a height of 1.2m above floor level and 1m away from the façade of the NSRs relying on openable window/slide door for ventilation. The location of the assessment points is shown in [Figure 4.2](#) and [Figure 4.3](#).

Offices, common rooms, and activity rooms are served by mechanical ventilation and air-conditioning (MVAC) system and do not rely on openable windows for ventilation. Therefore, these spaces are excluded from the road traffic noise assessment.

4.5.1.3 Assessment Assumption and Methodology

As advised by the Project Traffic Consultant, it is anticipated that the traffic will grow continuously within 15 years from occupation of the Proposed Development (i.e., Year 2047 = Year of occupancy (Year 2032) + 15 years). Therefore, the road traffic noise levels are predicted based on the projected peak hour traffic flows for the worst year within 15-year from the year of occupancy. The traffic forecast in Year 2047 is provided by the Traffic Consultant under the same application. The traffic data at peak hour for both AM and PM are taken into consideration in the assessment. All major roads within 300m from the Site are included in the assessment. The traffic forecast data is presented in [Appendix C2](#).

Web-Based Traffic Noise Assessment Tool (Web-NAT) is used for the preparation of traffic noise model files, plans and mitigation schedule. The road traffic noise impact at the assessment points is predicted using the computer model “NoiseMap Enterprise - RoadNoise” which implements the calculation method as prescribed in the Calculation of Road Traffic Noise (CRTN) developed by UK Department of Transport, Welsh Office in 1988. The predicted noise levels are then compared against the HKPSG noise criterion for evaluating the impact.

In accordance with the Hong Kong Environmental Database (HKED), some road segments of Tuen Mun Road, Castle Peak Road – Lingnan and Castle Peak Road – San Hui within the assessment area are paved by the low noise road surfacing material. Hence, the surface type of these road segments will be set as “Pervious” in the model to demonstrate the actual road conditions. The section of Tuen Mun Road from Fung Tei Station to the Lam Tei Raw Water Pumping Station is provided with noise enclosure. Given the effective screening of traffic noise by the enclosure, a traffic flow of 1 vehicle per hour is assumed to illustrate the acoustic effect of the noise enclosure. The location of road segments that are provided with low noise road surface material and noise enclosure is shown in [Figure 4.4](#).

4.5.1.4 Assessment Results

Based on the road traffic noise assessment results at peak hour, the maximum predicted traffic noise levels at all identified NSRs range from 56.9 dB(A) to 71.5dB(A). The compliance rate is 80.2%. The summary of maximum traffic noise levels is provided in [Appendix C3](#). Location of predicted exceedances are indicated in [Figure 4.5](#) and [Figure 4.6](#).

4.5.1.5 Recommended Noise Mitigation Measures

Acoustic window (Baffle Type) installation is proposed as mitigation measures. [Figure 4.4](#) shows the locations of the proposed mitigation measures. After adopting the proposed acoustic windows, the traffic noise levels at all identified NSRs range from 56.9 dB(A) to 70.4 dB(A). The summary of noise level at all NSRs after adopting the mitigation measures and the proposed mitigation schedule are provided in [Appendix C4](#) and [Appendix C5](#).

Acoustic Window (Baffle Type) (2-PN)

According to ProPECC PN 5/23, there is a configuration of Acoustic window (Baffle Type) with opening of around 1.1 m² (750mm x 1500mm), inner sliding door with gap width of and overlapping length of at least 100mm, for referenced room area of 18 m². A noise reduction of 7dB(A) is achievable. Considering the room size adjustment, a 6.4dB(A) reduction is applied for the NSRs with room areas of approximately 15.8m². The proposed acoustic windows shall follow the size and configuration of the acoustic windows stipulated in ProPECC PN 5/23. The configuration of the Acoustic Window (Baffle Type) (2-PN) is provided in [Appendix C6](#).

The configuration of noise reduction of acoustic windows and noise reduction after adjustment for improvement measures, room size, etc. are shown in [Appendix C6](#). The location of proposed mitigation measures is provided in [Figure 4.7](#) and [Figure 4.8](#).

Glass panes in all windows of all habitable rooms (e.g. dormitories) in residential dwellings in the RCHE development have a minimum thickness of 6mm. All these windows are well-gasketed, providing the future occupants an option for a quieter indoor noise environment.

4.5.2 Rail Noise

4.5.2.1 Source of Rail Noise

The Proposed Development is located in the vicinity of the Siu Hong MTR and Light Rail Transit (LRT) station. The MTR station serves the Tuen Ma Line (Tuen Mun–Wu Kai Sha), while the nearby LRT stations serve Routes 614, 614P, 751, 610, 505, 615, and 615P. The TML is largely enclosed, with only a short exposed section of approximately 70m. The Proposed Development is situated about 170 m to the east of the exposed section and approximately 180 m to the east and northeast of the LRT. The location of the TML and LRT are shown in [Figure 4.9](#).

4.5.2.2 Assessment Criteria

Under the Noise Control Ordinance (NCO), noise criteria applicable to the Proposed Development is stipulated in the “Technical Memorandum for the Assessment of the Noise from Places other than Domestic Premises, Public Places or Construction Sites” (IND-TM).

The Site is located in close proximity of the Tuen Mun Road. According to “*The Annual Traffic Census 2024*” issued by Transport Department (TD), the annual average daily traffic flow on Tuen Mun Road is more than 30,000. The road is considered as Influencing Factor (IF) in accordance with the IND-TM. However, noise enclosure is provided at Tuen Mun Road. Therefore, it is considered as indirectly affected by IF. Given that the type of area containing NSRs of the Site is “(ii) Low density residential area consisting of low-rise or isolated high-rise developments” and it is indirectly affected by IF, the Area Sensitivity Rating of the Site is classified as “B”. Noise standards for the rail noise assessment are tabulated in [Table 4.6](#) and shall be adopted for all time periods in the assessment.

Table 4.6 Noise Standards for Rail Noise

Time Period	Acceptable Noise Level (ANL) in IND-TM, dB(A)
Day (0700 to 1900 hours)	65
Evening (1900 to 2300 hours)	65
Night (2300 to 0700 hours)	55

In addition, Table 4.1 of HKPSG Chapter 9 has provided noise standards for assessing rail noise, which are Leq (24 hour) 65dB(A) and Lmax (2300-0700) 85dB(A). As the noise criteria in IND-TM is regarded as more stringent. Thus, the noise criteria of 55dB(A) during nighttime shall be followed.

Besides, Section 4.2.10 of the HKPSG Chapter 9 has also provided the required horizontal separation from the edge of track to the facade of sensitive uses. The requirements are shown in [Table 4.7](#).

Table 4.7 Required Horizontal Separation from the Edge of Track to the Façade of Sensitive Uses

Rail Line	Horizontal Separation Required (m)
MTR	25m (the side parapets break the line of sight of the bogie)
LRT	25m

4.5.2.3

Assessment Assumption and Methodology

An elevated vehicular road (approximately from 11.1mPD to 18.1mPD) is located in front of the exposed section of the TML (approximately 7mPD). Therefore, there is no direct line of sight between the NSRs within the Proposed Development and the TML.

On the other hand, the at-grade LRT tracks are located to the west of the Site which is blocked by Siu Hong Station (approximately 27mPD) and the aforementioned elevated road (approximately from 11.1mPD to 18.1mPD). Therefore, there is no direct line of sight between the at-grade LRT and the NSRs.

In addition, a LRT viaduct is located in the vicinity of the Site. The elevated railway connects Fung Tei Station and Siu Hong Station, crossing above the TML and Tuen Mun Road and serves two Light Rail routes, Routes 614 and 614P.

As a result, the MTR and at-grade LRT routes are excluded from the rail noise assessment due to the absence of direct line of sight. Meanwhile, the NSRs within the Proposed Development that face the northwest and south are directly affected by the LRT viaduct due to direct line of sight. Therefore, rail noise assessment has been conducted at LRT viaduct. The location of the representative NSRs is presented in [Figure 4.10](#).

On-site measurement of the rail operation at LRT viaduct was conducted on 11 December 2025 during morning peak hour between 07:00 and 09:00. The location of rail noise measurement is provided in [Figure 4.11](#). The noise measurement location is situated in the vicinity of the at-grade LRT tracks, the Siu Hong Station (South) Public Transport Interchange (Siu Hong South PTI) and the LRT viaduct. Noise data influenced by train movements on the at-grade LRT tracks and vehicular traffic within the Siu Hong South PTI are excluded to ensure that the measured noise data are representing the operation of LRT viaduct. Furthermore, the noise data that are recorded during the periods when trains were passing simultaneously on both the near-side and far-side tracks of the LRT viaduct were also excluded to ensure the accuracy and reliability of the noise data.

The rail noise assessment is based on the prediction procedures in “Calculation of Railway Noise (1995)” published by the Department of Transport of the United Kingdom. The LRT viaduct was divided into 6 segments (Segments 1-6) to allow individual sound exposure levels (SELs) and to account for differences in noise emissions between curved and non-curved sections of the track.

6 representative NSRs from the northwest façade and 8 representative NSRs from the south façade of the Proposed Development are included in the assessment. Given that the highest level of the LRT viaduct within Segments 1–6 is approximately 17.0mPD, the representative NSRs at 4/F are selected for assessment (i.e. 17.7mPD + 1.2m above floor level = 18.9mPD). The details of the rail noise measurement are provided in [Appendix C7](#).

According to the MTRC, the peak operation frequency on the LRT viaduct (Routes 614 and 614P) is about 5 trains per direction every 30 minutes, with a maximum operating speed of 60 km/h in both directions. The reply from MTRC is provided in [Appendix C8](#). The summary of assessment assumption is provided in [Table 4.8](#).

Table 4.8 Summary of Assessment Assumption

Parameters	Assumptions	Remark
Train Frequency	$=10 \log(N1) \text{ dB(A)}$	N1 is the train frequency in 30 minutes. Peak train frequency during morning peak hour is adopted in the calculation for worst-case scenario.
Train Speed Correction	$=20 \log(V/V_{\text{ref}}) \text{ dB(A)}$	V and Vref are the average train speeds
Distance Correction	$C_{\text{dist}} = -10 \log_{10} (\text{dist}/25)$	where dist is the perpendicular slant distance of track segment to NSR in meters
Conversion to LAeq(30min)	$=10 \log(1/1800) \text{ dB(A)}$	-
Façade Correction	3 dB(A)	Noise measurement is conducted under free-field condition.
View of Angle	$= 10 \log (\pi\theta / 180 - \cos 2\alpha \sin \theta) - 5 \text{ dB(A)}$	α is the acute angle between a line drawn through the receiver point, parallel to the track and the line bisecting the angle of view θ .
Maintenance Factor	3dB(A)	-
Barrier Effects	-	Not applicable to this project.
Joints and Crossovers	-	Not applicable to this project as the joints of the tracks are located to the northwest and southwest of the Site which are blocked by Siu Hong Station and the elevated vehicular road.

4.5.2.4 Assessment Result

Based on the assessment results, the maximum measured Leq is 76.6 dB(A), while the predicted railway noise levels at representative NSRs range from 35.9 dB(A) to 42.9 dB(A), complying with the IND-TM criteria.

In the assessment, peak train frequency and noise measurement data collected during the morning peak period were adopted to represent the worst-case scenario. Under normal railway operation, train movements outside the peak period would be less frequent. As such, the Leq (30 minutes) represents a conservative estimate of the noise impact, and the Leq (24 hours) would be lower than or equal to the Leq (30 minutes), while the Lmax (2300–0700) would be lower than the maximum measured Leq. As a result, the results comply with the requirement of Leq (24 hour) 65dB(A) and Lmax (2300-0700) 85dB(A) stipulated in HKPSG.

Thus, no adverse rail noise impact on the Proposed Development is anticipated. The assessment result is summarised in [Table 4.9](#). The measurement result and detailed calculations of the rail noise assessment are provided in [Appendix C9](#).

Table 4.9 Summary of Rail Noise Assessment Result

NSR ID	Overall Predicted Noise Level (Leq, 30mins), PNL
R1	42.9
R2	42.3
R3	41.4
R4	40.6
R5	39.6
R6	38.6
R7	37.6
R8	35.9
R9	39.6
R10	39.7
R11	39.6
R12	39.4
R13	39.1
R14	39.0

4.5.3 Planned Fixed Noise Sources Within the Proposed Development

Potential fixed plant noise associated with the Proposed Development may include noise from the operation of mechanical ventilation and air-conditioning (MVAC), variable refrigerant volume (VRV) system.

The actual noise impact from the fixed noise sources to the existing NSRs and the Proposed Development shall be assessed during the detailed design stage of M&E equipment. E&M consultant or contractor should consider the cumulative noise impact with the existing fixed noise sources (e.g. the equipment of Tuen Mun North

Offtake and Pigging Station) and ensure that the proposed E&M equipment shall be selected and installed to comply with the HKPSG's noise criteria stated in Table 4.4 or as the prevailing background noise level whichever is lower. As such, no adverse noise impact from fixed sources on existing NSRs is anticipated during operation.

4.5.4 Existing Fixed Noise Sources

4.5.4.1 Identified Existing Fixed Noise Sources

Site survey was conducted on 11 December 2025 to identify the existing fixed noise sources in the vicinity of the Site. The identified existing fixed noise sources within 300m assessment area are tabulated in Table 4.10 and shown in Figure 4.12.

Table 4.10 Location of Existing Fixed Noise Source

ID	Location	Noise Sources
FS1 – FS5	Fu Tei Fire Station	VRV units
PS1 – PS14	Tuen Mun Government Primary School	VRV units
LU1 – LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled chillers
OP1	Tuen Mun North Offtake and Pigging Station	Offtake and pigging station equipment
TW1	Tuen Mun Treatment Works	Treatment works equipment
EBS1 – EBS2	Ecclesia Bible College	Air-cooled chillers

Existing noise sources EBS1 – EBS2 are located on the rooftop of the Ecclesia Bible College. These noise sources are completely screened by the Parkland Villas, and do not have a direct line of sight to the Proposed Development. As a result, they are excluded from the assessment.

4.5.4.2 Assessment Criteria

As mentioned above, the type of area for the subject site is classified as “(ii) Low density residential area consisting of low-rise or isolated high-rise developments”, and it is indirectly affected by the IF. The Area Sensitivity Rating of the subject site area is defined as “B”. Noise standards for the existing fixed noise sources impact assessment are tabulated in Table 4.11.

Table 4.11 Noise Standards for Existing Fixed Noise Sources

Time Period	ANL in IND-TM, dB(A)
Day and Evening (0700-2300 hours)	65
Night (2300 to 0700-Hours)	55

The Noise Sensitive Receivers (NSRs) and Acceptable Noise Level (ANL) are used for assessment purpose only; it does not represent Noise Control Authority's

decision in determining the noise criteria based on the legislation and practices being in force.

Under Noise Control Ordinance (NCO), noise criteria for existing fixed noise sources are stipulated in the Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites” (IND-TM).

4.5.4.3 Assessment Methodology and Assumptions

Direct noise measurements were conducted to determine the noise levels at the Tuen Mun North Offtake and Pigging Station and Tuen Mun Treatment Works. To demonstrate the worst-case scenario, the measured noise level at daytime will be adopted for the assessment of existing fixed noise source at both daytime and evening time. The measurement locations and corresponding results are provided in [Figure 4.12](#) and [Appendix C10](#).

The accumulative noise level received by the affected NSRs is calculated by adopting standard acoustic principles as shown below:

$$SWL = SPL + DC - FC - TC$$

, where

SWL	= Sound power level, dB(A)
SPL	= Sound pressure level, dB(A)
DC	= Distance attenuation, dB(A) (i.e., $20\log D + 8$, where D is distance in m)
FC	= Façade correction, dB(A)
TC	= Tonality correction, dB(A)

To represent the worst-case scenario, the assessment locations for all representative NSRs were selected at floors with the shortest vertical distances to the relevant existing fixed noise sources. NSRs located at the northwest façade were assessed at 7/F, while NSRs located at the south façade of the Proposed Development were assessed at 2/F, 3/F, and 7/F.

As the noise levels of existing fixed noise source of FS1 – FS5, PS1 – PS14 and LU1 – LU2 are not available, the noise levels of the VRV units will be referenced from equipment catalogues with similar specifications while the noise level of air-cooled chillers are referenced from Table 11 of “Good Practices on the Control of Noise from Electrical & Mechanical Systems” published by the EPD. To represent the worst-case scenario, the cooling capacity of the air-cooled chiller is assumed to be 400 tons. The catalogues of the referenced equipment and Table 11 of “Good Practices on the Control of Noise from Electrical & Mechanical Systems” are provided in the [Appendix C11](#).

4.5.4.4 Assessment Result

The predicted noise levels at N1 to N5 on 2/F, 3/F and 7/F range from 42 dB(A) to 65 dB(A) during the daytime and evening periods, and from 40 dB(A) to 54 dB(A) at nighttime. The detailed calculations for the existing fixed noise sources are presented in [Appendix C12](#) and [Table 4.12](#).

Table 4.12 Summary of Existing Fixed Noise Result

NSR ID	Predicted Existing Fixed Noise					
	Day Time & Evening Time			Night Time		
	2/F	3/F	7/F	2/F	3/F	7/F
N1	-	-	42	-	-	40
N2	-	-	42	-	-	40
N3	62	64	64	54	54	54
N4	60	64	64	52	52	52
N5	59	65	65	51	51	51

As the predicted noise levels at N1 to N5 on 2/F, 3/F and 7/F are lower than 65 dB(A) during the daytime and evening periods, and lower than 55 dB(A) at nighttime, all the NSRs comply with the noise criteria stipulated in the IND-TM. Therefore, no existing fixed noise sources impact is anticipated.

5 Water Quality

5.1 Criteria and Guidelines

The construction and operation of the Site shall comply with the Water Pollution Control Ordinance (WPCO) and its Technical Memorandum.

The following Legislation, Standards and Practice Notes should be considered in the assessment:

- Water Pollution Control Ordinance (Cap. 358): Water Quality Objectives (WQOs) for North Western Water Control Zone (WCZ);
- Water Pollution Control Ordinance (Cap. 358): Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters; and,
- EPD's Practice Notes for Professional Persons ProPECC PN 2/24 "Construction Site Drainage".
- ETWB TC(W) No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works"
- ProPECC PN 1/23 "Drainage Plans subject to Comment by the Environmental Protection Department"

Guidelines for handling construction site runoff and discharges in ProPECC PN 2/24 "Construction Site Drainage" should be followed. The guidelines and relevant requirements will be specified in the construction contracts. The guidelines in ProPECC PN 1/23 "Drainage Plans subject to Comment by the Environmental Protection Department" should also be followed in the design of drainage plans for the Proposed Development.

The nearest Water Control Zone (WCZ) to the Site is the North Western WCZ. Table 5.1 summarizes the WQOs for the North Western WCZ. In addition to the WQOs, any discharges into the inshore waters of the North Western WCZ are required to comply with Table 10b of "Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters".

Table 5.1 Summary of Water Quality Objectives for North Western WCZ

Parameters	Water Quality Objectives	Part or parts of Zone
Aesthetic Appearance	a) Waste discharges shall cause no objectionable odours or discolouration of the water.	Whole Zone
	b) Tarry residues, floating wood, articles made of glass, plastic, rubber or of any other substances should be absent.	Whole Zone

Parameters	Water Quality Objectives	Part or parts of Zone
	c) Mineral oil should not be visible on the surface. Surfactants should not give rise to a lasting foam.	Whole Zone
	d) There should be no recognisable sewage-derived debris.	Whole Zone
	e) Floating, submerged and semi-submerged objects of a size likely to interfere with the free movement of vessels, or cause damage to vessels, should be absent.	Whole Zone
	f) Waste discharges shall not cause the water to contain substances which settle to form objectionable deposits.	Whole Zone
Bacteria	a) The level of Escherichia coli should not exceed 610 per 100 mL, calculated as the geometric mean of all samples collected in a calendar year.	Secondary Contact Recreation Subzones
	b) The level of Escherichia coli should be less than 1 per 100 mL, calculated as the running median of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days.	Tuen Mun (A) and Tuen Mun (B) Subzones and Water Gathering Ground Subzones
	c) The level of Escherichia coli should not exceed 1 000 per 100 mL, calculated as the running median of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days.	Tuen Mun (C) Subzone and other inland waters
	d) The level of Escherichia coli should not exceed 180 per 100 mL, calculated as the geometric mean of all samples collected from March to October inclusive. Samples should be taken at least 3 times in one calendar month at intervals of between 3 and 14 days.	Bathing Beach Subzones
Colour	a) Waste discharges shall not cause the colour of water to exceed 30 Hazen units.	Tuen Mun (A) and Tuen Mun (B) Subzones and Water Gathering Ground Subzones
	b) Waste discharges shall not cause the colour of water to exceed 50 Hazen units.	Tuen Mun (C) Subzone and other inland waters
Dissolved Oxygen	a) Waste discharges shall not cause the level of dissolved oxygen to fall below 4 mg per litre for 90% of the sampling occasions during the whole year; values should be calculated as water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed). In addition, the concentration of dissolved oxygen should not be less than 2 mg per litre within 2 m of the	Marine waters

Parameters	Water Quality Objectives	Part or parts of Zone
	seabed for 90% of the sampling occasions during the whole year.	
	b) Waste discharges shall not cause the level of dissolved oxygen to be less than 4 mg per litre.	Tuen Mun (A), Tuen Mun (B) and Tuen Mun (C) Subzones, Water Gathering Ground Subzones and other inland waters
pH	a) The pH of the water should be within the range of 6.5–8.5 units. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.2 unit.	Marine waters excepting Bathing Beach Subzones
	b) Waste discharges shall not cause the pH of the water to exceed the range of 6.5–8.5 units.	Tuen Mun (A), Tuen Mun (B) and Tuen Mun (C) Subzones and Water Gathering Ground Subzones
	c) The pH of the water should be within the range of 6.0–9.0 units	Other inland waters
	d) The pH of the water should be within the range of 6.0–9.0 units for 95% of samples collected during the whole year. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.5 unit.	Bathing Beach Subzones
Temperature	Waste discharges shall not cause the natural daily temperature range to change by more than 2.0°C.	Whole Zone
Salinity	Waste discharges shall not cause the natural ambient salinity level to change by more than 10%.	Whole Zone
Suspended Solids	a) Waste discharges shall neither cause the natural ambient level to be raised by more than 30% nor give rise to accumulation of suspended solids which may adversely affect aquatic communities.	Marine waters
	b) Waste discharges shall not cause the annual median of suspended solids to exceed 20 mg per litre.	Tuen Mun (A), Tuen Mun (B) and Tuen Mun (C) Subzones and Water Gathering Ground Subzones
	c) Waste discharges shall not cause the annual median of suspended solids to exceed 25 mg per litre.	Other inland waters

Parameters	Water Quality Objectives	Part or parts of Zone
Ammonia	The un-ionized ammoniacal nitrogen level should not be more than 0.021 mg per litre, calculated as the annual average (arithmetic mean).	Whole Zone
Nutrients	a) Nutrients shall not be present in quantities sufficient to cause excessive or nuisance growth of algae or other aquatic plants.	Marine waters
	b) Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.3 mg per litre, expressed as annual water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed).	Castle Peak Bay Subzone
	c) Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.5 mg per litre, expressed as annual water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed).	Marine waters excepting Castle Peak Bay Subzone
5-Day Biochemical Oxygen Demand	a) Waste discharges shall not cause the 5-day biochemical oxygen demand to exceed 3 mg per litre	Tuen Mun (A), Tuen Mun (B) and Tuen Mun (C) Subzones and Water Gathering Ground Subzones
	b) Waste discharges shall not cause the 5-day biochemical oxygen demand to exceed 5 mg per litre	Other inland waters
Chemical Oxygen Demand	a) Waste discharges shall not cause the chemical oxygen demand to exceed 15 mg per litre.	Tuen Mun (A), Tuen Mun (B) and Tuen Mun (C) Subzones and Water Gathering Ground Subzones
	b) Waste discharges shall not cause the chemical oxygen demand to exceed 30 mg per litre.	Other inland waters
Toxins	a) Waste discharges shall not cause the toxins in water to attain such levels as to produce significant toxic, carcinogenic, mutagenic or teratogenic effects in humans, fish or any other aquatic organisms, with due regard to biologically cumulative effects in food chains and to toxicant interactions with each other.	Whole Zone
	b) Waste discharges shall not cause a risk to any beneficial use of aquatic environment.	Whole Zone
Phenol	Phenols shall not be presented in such quantities as to produce a specific odour, or in concentration greater than 0.05 mg per litre as C ₆ H ₅ OH	Bathing Beach Subzones

Parameters	Water Quality Objectives	Part or parts of Zone
Turbidity	Waste discharges shall not reduce light transmission substantially from the normal level.	Bathing Beach Subzones

5.2 Baseline Condition

The baseline condition has referred to the past marine water quality monitoring data from the EPD. The nearest monitoring station to the Site is NM2. According to the Marine Water Quality in Hong Kong 2024 Report issued by the EPD, the overall compliance rate for the North Western WCZ was 72%, with full compliance with the DO and NH₃-N objectives in 2024. Under the influence of high seasonal background level in the Pearl River Estuary, the compliance rate for TIN WQO was 17%. The North Western WCZ complied with the bacteriological WQO of ≤ 610 *E. coli* counts/100mL. Table 5.1 presents the water quality monitoring data at the monitoring station extracted from the EPD's publication "2024 Marine Water Quality in Hong Kong".

Table 5.2 Summary of EPD Water Quality Monitoring Data for NM2 at North Western WCZ in 2024

Parameters		North Western WCZ NM2
Temperature (°C)		25.1 (19.5 – 29.0)
Salinity		26.3 (13.9 – 33.0)
Dissolved Oxygen (mg/L)	Depth average	6.0 (4.4 – 7.5)
	Bottom	5.4 (3.7 – 7.5)
Dissolved Oxygen (%Saturation)	Depth average	84 (60 - 102)
	Bottom	76 (55 - 99)
pH		8.0 (7.6 - 8.3)
Secchi Disc Depth (m)		2.0 (1.6 – 3.0)
Turbidity (NTU)		4.7

Parameters	North Western WCZ NM2
	(0.5 – 9.1)
Suspended Solids (mg/L)	5.9 (2.5 – 9.9)
5-day Biochemical Oxygen Demand (mg/L)	0.8 (0.1 – 3.5)
Ammonia Nitrogen (mg/L)	0.071 (0.014 - 0.150)
Unionised Ammonia (mg/L)	0.003 (<0.001 - 0.006)
Nitrite Nitrogen (mg/L)	0.051 (0.005 - 0.123)
Nitrate Nitrogen (mg/L)	0.446 (0.147 - 0.980)
Total Inorganic Nitrogen (mg/L)	0.57 (0.29 – 1.12)
Total Kjeldahl Nitrogen (mg/L)	0.24 (0.15 - 0.49)
Total Nitrogen (mg/L)	0.74 (0.40 – 1.29)
Orthophosphate Phosphorus (mg/L)	0.018 (<0.002 - 0.035)
Total Phosphorus (mg/L)	0.07 (0.04 - 0.16)
Silica (as SiO ₂) (mg/L)	2.48 (0.36 – 6.43)
Chlorophyll-a (g/L)	4.5 (0.4 – 20.3)
E. coli (cfu/100 mL)	68 (8 - 1100)
Faecal Coliforms (cfu/100 mL)	140 (26 - 1500)

Note:

1. Unless otherwise specified, data presented are depth-averaged (A) values calculated by taking the means of three depths: Surface (S), Mid-depth (M), Bottom (B).
2. Data presented are annual arithmetic means of the depth-averaged results except for *E. coli* and faecal coliforms which are annual geometric means.
3. Data in brackets indicate the ranges.

5.3 Water Sensitive Receivers

Water sensitive receivers (WSRs) within 500m of the study area from the Site boundary were identified. The identified WSRs are listed in [Table 5.3](#) and the locations of the WSRs are shown in [Figure 5.1](#).

Table 5.3 Water Sensitive Receivers

WSR	Location	Nature of WSRs	Shortest Separation Distance (m)
WSR 1	To the west of the Site	River Channel	116
WSR 2	To the northwest of the Site	Channelised Water Course	486
WSR 3	To the north of the Site	Channelised Water Course	123
WSR 4	To the north of the Site	Channelised Water Course	443
WSR 5	To the east of the Site	Channelised Water Course	353
WSR 6	To the south of the Site	Channelised Water Course	148
WSR 7	To the southeast of the Site	Channelised Water Course	278
WSR 8	To the east of the Site	Channelised Water Course	181
WSR 9	To the southeast of the Site	Semi-natural Water Course	474

5.4 Water Quality During Construction Phase

Construction site runoff and drainage, sewage effluent and liquid/ chemical spillage generated from construction activities are the potential pollution sources and may induce water quality impact if not properly controlled.

The Contractor shall apply for a Discharge License from EPD in accordance with the WPCO. The effluent standards will have to comply with the Discharge License requirements. Appropriate water pollution control measures in ProPECC PN2/24 and ETWB TC (Works) No.5/2005 shall be followed during construction stage. Applicable measures may include, but not limited to the following:

- High loading of suspended solids (SS) in construction site runoff shall be prevented through proper site management by the contractor;
- Construction works should be programmed to minimise soil excavation works where practicable during rainy conditions. Exposed soil surfaces should be protected from rainfall through covering temporarily exposed slope surfaces or stockpiles with tarpaulin;
- Temporary ditches, earth bunds will be created/ provided where necessary to facilitate directed and controlled discharge of runoff into storm drains via sand/ silt removal facilities such as sand traps, silt traps and sediment retention basin;
- Sand and silt removal facilities, channels and manholes will be regularly maintained and the deposited silt and grit should be removed by the contractor, and at the onset of and after each rainstorm to ensure that these facilities area functioning properly;
- Manholes (including newly constructed ones) should be adequately covered or temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system;
- Vehicle wheel washing facilities should be provided at the Site exit such that mud, debris, etc. deposited onto the vehicle wheels or body can be washed off before the vehicles are leaving the Site area;
- Sections of the roads 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; and
- Sufficient chemical toilet(s) will be provided for workers during construction stage. All chemical toilets, if any, shall be regularly cleaned and the night-soil collected and transported by a licensed contractor to a Government Sewage Treatment Works facility for disposal.

Regarding management of chemicals such as oils and solvents involved with Project construction, the following measures shall apply:

- Plant workshop/ maintenance areas should be bunded and constructed on a hard standing. Sediment traps and oil interceptors should be provided at appropriate locations;
- Oil and grease removal facilities should also be provided where appropriate, for example, in area near plant workshop/ maintenance areas; and
- Chemical waste arising from the Site should be properly stored, handled, treated and disposed of in compliance with the requirements stipulated under the Waste Disposal (Chemical Waste) (General) Regulation.

As the above water pollution measures will be properly implemented during the construction stage, the effluent discharge shall be in compliance with the discharge license requirements, and the Technical Memorandum (TM) under WPCO.

All construction works will be conducted within the Site and will not encroach into existing streams. The construction site runoff and wastewater arising from the Site will be properly treated according to the aforesaid control measures. The effluent discharge will be in compliance with the discharge license requirements, and the

Technical Memorandum (TM) under WPCO. Hence, no adverse impact on WSRs is anticipated.

5.5 Water Quality During Operation Phase

The sewage generated from the Proposed Development will include the wastewater generated from toilet flushing, kitchens and other domestic wastewater. All domestic sewage will be collected via the internal drainage system and discharged to the public foul sewer. Grease traps with adequate capacity will be provided for kitchen wastewater to remove oil and grease prior to discharge and will be properly maintained and regularly cleaned. Thus, no adverse water quality impact is anticipated.

The drainage record plans were obtained from the Drainage Services Department (DSD) in November 2025 to gather the background information on sewerage infrastructure in the vicinity of the Site. According to the drainage record plans, the Site is currently served by public sewerage and drainage facilities located to the south of the Site.

To control non-point source runoff, appropriate drainage measures will be implemented in accordance with ProPECC PN 1/23, including the provision of catchpits with sand/silt traps, proper site drainage, and regular cleaning of paved areas to prevent the accumulation of debris and pollutants. ProPECC PN 1/23 will be followed as far as practicable during the operation stage.

A Drainage Impact Assessment Report have been conducted. The report demonstrates that the surface runoff from relevant catchments and within the Site will be collected by a series of existing drainage system. Catchpits with sand trap or rubbish traps at the outlet of the proposed drainage system will be provided to prevent pollutant from entering the public drainage. As such, the Proposed Development would not cause adverse drainage impacts or increase in the flooding susceptibility of the adjacent areas.

A Sewerage Impact Assessment Report have been conducted. The Average Dry Weather Flow (ADWF) from the Proposed Development is estimated to be 181 m³/day. The sewage generated from the Proposed Development will be conveyed to Siu Hong Sewage Pumping Station. The capacities of the existing and proposed sewerage pipes range from 17.3% to 171.9%.

It is noted that a section of the downstream sewers (FMH1015184 – FMH1015270) does not have sufficient capacity to accommodate the existing upstream flows prior to the Proposed Development. However, a minimum freeboard of 0.5m is available in these pipes after the Proposed Development. As such, the Proposed Development does not cause adverse impact on the downstream sewers.

The sewer connection from the Proposed Development to the public sewers will be constructed and completed before the occupation of the building. Therefore, no adverse sewerage impact due to the proposed uses on the local area is anticipated.

6 Waste Management

6.1 Criteria and Guidelines

The Waste Disposal Ordinance prohibits the unauthorised 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);
- Land (Miscellaneous Provisions) Ordinance (Cap. 28);
- Public Health and Municipal Services Ordinance (Cap. 132) - Public Cleansing and Prevention of Nuisances Regulation;
- Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers, No. ADV-19, Construction and Demolition Waste;
- Development Bureau (Works) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness;
- Code of Practice on the Packaging, Labelling and Storage of Chemical Waste;
- Development Bureau (DEVB) Technical Circular (Works) (TC(W)) No. 6/2010 – Trip Ticket System for Disposal of C&D Materials; and
- Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers, No. ADV-19, Construction and Demolition Waste.

6.2 Assessment Methodology

The assessment of waste management implications from handling, storage, collection, transportation and disposal of solid waste materials generated by the Proposed Development have been undertaken.

The waste management hierarchy has been applied in the assessment and development of mitigation measures for waste. The waste management hierarchy is a concept which shows the desirability of various waste management methods and comprises the following in order of descending preference:

- a) avoidance;
- b) minimisation;
- c) recycling/reuse;
- d) treatment; and
- e) disposal.

All opportunities for reducing waste generation have been assessed based upon the following factors:

- a) avoiding or minimising waste generation throughout design, construction and operational phase;
- b) adopting better management practices to promote segregation materials;
- c) reuse and recycling on site or other projects; and
- d) diverting C&D materials to public fill reception facilities as far as possible.

The quantity, quality and timing of the waste arising as a result of the construction and operation activities of the Project and associated works have been estimated, based on the sequence and duration of these activities. The design, general layout, construction methods and programme to minimize the generation of public fill/inert C&D materials and maximize the use of inert C&D materials for other construction works (if possible) have been considered.

The potential waste management implications associated with the handling, transportation and disposal of waste arising from the construction works have been assessed with reference to the following approach:

- a) estimation of the types, timing and quantities of the wastes to be generated and fill to be imported; and
- b) assessment of the potential waste management implications on the capacity of collection, transfer and disposal facilities.
- c) the waste generation and disposal rate adopted in the assessment is based on statistical data issued by EPD "Monitoring of Solid Waste in Hong Kong – Waste Statistics for 2024".

Prior to considering the disposal options for various types of wastes, opportunities for reducing waste generated, on-site or off-site re-use and recycling have been evaluated. Measures which can be taken in the design phase (e.g. by modifying the design approach) and in the construction phase for maximizing waste reduction have been separately considered. In the design phase, the building layout and structural design are optimised to minimise material consumption, and the use of standardised and prefabricated components will be adopted to reduce construction waste and material off-cuts.

After considering all the opportunities for reducing waste generation and maximizing re-use, the types and quantities of the remaining wastes required to be disposed of have been estimated and the disposal options for each type of wastes have been described. The disposal method recommended for each type of wastes has taken into account the result of the assessment.

The impacts caused by handling (including labelling, packaging and storage), collection, and reuse/disposal of wastes have been addressed and appropriate mitigation measures have been proposed.

6.3 Waste During Construction Phase

6.3.1 Construction Stage

The construction activities associated with Proposed Development, include demolition, excavation and construction of structure works. The following types of wastes are identified during the construction of the Proposed Development:

- C&D materials;
- Chemical waste; and
- General refuse.

The estimated quantity of each type of waste during construction stage has been presented in [Table 6.1](#).

Table 6.1 Summary of Waste Generation during Construction Stage

Material Type	Source(s)	Handling	Disposal / Treatment	Estimated Quantity
C&D Materials	Site formation and Building works	Sort on-site into inert C&D materials (broken concrete and public fill) and non-inert C&D materials (e.g. timber, paper, plastics, etc)	Inert C&D materials reused as backfilling materials on-site	144 m ³
			Inert C&D materials to be delivered to public fill reception facilities for other beneficial uses	576 m ³
			Non-inert C&D materials (e.g. timber, paper, plastics, etc.) reused or disposed of at landfill as the last resort	10 m ³
Chemical Waste	Cleansing fluids, solvent, lubrication oil and fuel from construction plant and equipment	Collected regularly and safely stored at a dedicated location and collected by a licensed chemical waste collector	To Chemical Waste Treatment Centre or other licensed facility for treatment	1L per month
General Refuse	Wastepaper, discarded containers, etc. generated from workforce (only the non-recyclable will be disposed of at landfill)	To be stored in designated area prior to collection and disposal	To separate recyclable materials (e.g., paper, tin-cans, etc.) for collection by outside recyclers or disposal to landfill as the last resort	0.65kg per worker per day

6.3.2 Construction and Demolition (C&D) Materials

C&D materials will be generated from the construction activities. The inert portion of C&D materials mainly comprise of excavated soil, rock and concrete. The quantity of inert C&D materials to be generated is estimated about 642m³. About 128 m³ of inert C&D materials will be reused as backfilling materials on-site. About 514 m³ of inert C&D materials which cannot be reused during the construction works of the Project will be delivered to Tuen Mun Area 38 fill bank available at the time of construction.

A bulk factor of 1.4 is applied to account for the increase in volume of excavated materials in loose form. The loose volume of materials for disposal is estimated to be 720m³ (514 m³ x 1.4 = 720 m³). Given a dump truck capacity of 7.5m³, approximately 96 dump trucks would be required for transportation of C&D material throughout the construction period. A dumping license is required to be issued by the Civil Engineering & Development Department (CEDD). The Public Fill Committee in consultation with relevant project proponent is responsible for identifying suitable sites for public filling.

Furthermore, about 10 m³ of non-inert C&D materials will be reused and recycled as far as practicable, and the surplus will be disposed of at West New Territories Landfill.

6.3.3 Chemical Waste

The maintenance and servicing of construction plant and equipment may generate approximately 0.5L of chemical wastes during construction works, including cleaning fluids, solvents, lubrication oil and fuel.

Chemical wastes arising during the construction stage may pose environmental, health and safety hazards if not stored and disposed of in an appropriate manner as stipulated in the Waste Disposal (Chemical Waste) (General) Regulations. The potential hazards include:

- Toxic effects to workers;
- Adverse impacts on water quality from spills; and
- Fire hazards.

Materials classified as chemical wastes will require special handling and storage arrangements 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.

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 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.

Provided that this occurs, and the chemical waste is disposed at a licensed chemical waste treatment and disposal facility, the potential environmental impacts arising from the storage, handling and disposal of chemical waste generated from the construction activities will be negligible.

6.3.4 General Refuse

The construction workforce will generate general refuse such as waste papers, packaging material and food wastes. Actual volumes will be subjected to the Contractor's site practices. Assuming up to 10 workers will be working on site during the peak construction period, with general refuse generation rate of 0.65 kg per worker per day, the maximum amount of general refuse to be generated will be approximately 6.5 kg per day. Waste recycling for the general refuse should be conducted as far as practicable prior to disposal. The general refuse will be collected on-site, separately from C&D materials by an appropriate waste collector employed by the Contractor to the landfills.

Prior to off-site disposal, such wastes will have to be temporarily stored in a suitably covered storage area where it will have to be regularly cleaned and maintained to avoid attracting vermin and pests. With proper on-site handling and storage as well as regular disposal of these wastes, no adverse impacts are expected.

6.4 Waste During Operation Phase

6.4.1 General Refuse

General refuse, such as food waste, plastic, aluminium cans and wastepaper are expected to be generated during operation. The general refuse will be collected on a daily basis to minimise hygiene impacts and avoid accumulation. According to the information provided by the Project Proponent, it is estimated that 504 residents, 237 staffs and 1,008 visitors would be on-site during the operation phase.

Based on the 2024 solid waste monitoring data, the domestic disposal rate is 0.86kg/person/day with a recovery rate of 22%. Therefore, $0.86 \div (100\% - 22\%) = 1.1$ kg/person/day is adopted as the waste generation rate. The amount of general refuse to be generated from the Project is about 1,924 kg/day ($1,749 \times 1.1$ kg/person/day = 1,924 kg/person/day).

Recyclables like plastic containers, papers, glass bottles, aluminium cans and food waste should be separated from general refuse and delivered to the local recyclers to maximise reuse and recycle volume. Other non-recyclable general refuse would be collected by licensed collectors daily and disposed of at WENT Landfill.

6.4.2 Clinical Waste

Clinical waste, including dressings, sharps, pharmaceutical waste and disinfectants, is expected to be generated from basic medical care and treatment activities at the Proposed Development. Assuming a clinical waste generation rate of 0.02 kg per resident per day and an estimated on-site resident of approximately 504 during the

operation phase, the total quantity of clinical waste generated is estimated to be about 10.1 kg per day.

Clinical waste is potentially infectious or bio-hazardous and shall be segregated from general refuse and collected separately for proper disposal. The storage, handling, transportation and disposal of clinical waste shall be carried out in accordance with the Waste Disposal (Clinical Waste) (General) Regulation (Cap. 354O) and the Code of Practice for Major Clinical Waste Producers and Waste Collection. Materials classified as clinical waste will require special handling and storage arrangements and shall be collected by licensed collectors for appropriate treatment at the Chemical Waste Treatment Centre (CWTC).

6.4.3 Chemical Waste

Chemicals such as lubricating oil and solvent-based cleaners are expected to be used during the maintenance of E&M rooms and facilities. It is estimated that approximately 0.5L of chemical waste will be generated per day. In accordance with the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C), the operator shall register as a chemical waste producer should any chemical waste be expected to be generated on-site. Licensed chemical waste collectors shall be employed for the collection and transportation of the chemical waste to chemical waste treatment facility at Tsing Yi. The handling, transportation and disposal of chemical wastes shall be carried out in accordance with the Code of Practice on Packaging, Labelling and Storage of Chemical Wastes and A Guide to the Chemical Waste Control Scheme published by the EPD.

6.5 Recommended Waste Management Mitigation Measures

6.5.1 Construction Phase

Good Site Practice and Waste Reduction Measures

Unacceptable waste management implications are not expected, provided that good site practices are strictly implemented. The following recommendations will be implemented during the construction. With the appropriate implementation of these proposed mitigation measures, no waste management implication in general is envisaged.

- Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap 345N) and the Land (Miscellaneous Provision) Ordinance (Cap.28);
- Prepare a Waste Management Plan approved by the Engineer / Supervising Officer of the Project based on current best practice on Construction Sites;
- Waste licensed collector to collect waste;
- Implementation of trip ticket system with reference to ETWB(W) No.6/2010 Trip Ticket System for Disposal of Construction & Demolition Materials;

- Utilization of trucks with covers or enclosed containers for waste transportation;
- Provide staff training for proper waste management and chemical waste handling procedures;
- Separation of chemical waste for special handling and dispose to licensed facility for treatment;
- Sufficient waste disposal points and regular collection programme setup; and
- Recording system for waste generation, recycle and disposal.

The ADV-19 provides guidelines on construction and demolition (C&D) materials management, requiring the adoption of measures to minimise the generation of C&D materials for disposal during construction. In accordance with Practice Note ADV-19, appropriate waste management measures will be incorporated into the project planning and construction processes to ensure proper handling, reuse, recycling and disposal of C&D materials.

Construction and Demolition Materials

Prior to disposal of C&D waste, the following practices should be implemented.

- Avoid unnecessary removal or excessive pruning of trees. Preserve trees in their original locations and implement tree transplanting when on-site preservation is not feasible;
- Wood, steel and other materials should be separated for reuse and recycling to minimize the quantity of waste to be disposed of at the landfill;
- Minimize use of wood and reuse non-timber formwork to reduce C&D waste;
- Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;
- Designated areas for different materials storage should be assigned for segregation; and
- Encourage collection of aluminium cans, plastic bottles and packaging material and office paper.

In managing and disposing of removed trees and vegetation, reuse and recycling should be prioritised. There are several options available, including chipping them into woodchips or mulch for landscaping, reusing them as timber, converting them into biomass energy, decomposition and composting them for art and crafts, or creating wildlife habitats. The specific recycling method chosen will depend on factors such as tree condition, amount, and desired outcomes. In particular, the feasibility of recycling the tree and vegetation waste in Y Park will be explored.

Well-planned design and good site management can minimize over-loading and generation of waste materials such as concrete and cement grouts. Wooden frame should be replaced by metals. Plastic fencing and reusable site office structure can reduce C&D waste generation.

Under the Construction Waste Disposal Charging Scheme, construction waste producers such as construction and renovation contractors and premises owners, prior using government waste disposal facilities, need to prepare a billing account with EPD and pay for construction waste disposal.

A trip-ticket system will be implemented for surplus C&D materials disposal in accordance with DEVB TC(W) No.6/2010 and the Construction Waste Disposal Charging Scheme. Waste should be delivered to a public fill reception facility. Copies or counterfoils of trip tickets will be kept for record purpose. In addition, according to Annex 15 of the EIAO-TM, the transportation of construction waste will be monitored by means of dump trucks equipped with real-time tracking and monitoring devices.

With the appropriate implementation of these proposed mitigation measures, no waste management implication in C&D materials during construction is anticipated.

Chemical Waste

During the planning stage, alternatives should be explored for the processes that generate chemical waste to eliminate the use of chemicals, reduce the generation quantities or to select a chemical type of less impact on environment, health and safety.

The Contractor should register with EPD as chemical waste producers. 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. Chemical wastes should be stored in a suitable area close to the source of waste generation for temporary storage and in appropriate containers for collection by a licensed chemical waste collector for disposal at licensed facilities in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.

With the appropriate implementation of these proposed mitigation measures, no waste management implication in chemical waste during construction is anticipated.

General Refuse

General refuse should be stored in enclosed bins or compaction units separated from C&D materials and chemical wastes. Recycling bins will be provided for sorting of general refuse. A waste collector should be employed by the Contractor to minimize odour, pest and litter impacts. Open burning of refuse on the construction site is prohibited by law.

The Contractor should carry out an education programme for workers relating to avoiding, reducing, reusing and recycling general waste. This should include provision of three-colour recycling bins and on site and posters and leaflets reminding of the use of recycling bins. It is expected that such arrangements would minimise potential environmental impacts from waste generation.

With the appropriate implementation of these proposed mitigation measures, no waste management implication in general refuse during construction is anticipated.

6.5.2 Operation Phase

It is recommended that the following good operation practices should be adopted to minimise the waste management impacts and waste generation.

General Refuse

- Obtain the necessary waste disposal permits, including waste collection license, from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354) and the Land (Miscellaneous Provision) Ordinance (Cap. 28);
- Removed general refuse on a daily basis to minimize potential odour, pest and litter impact;
- 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;
- Adoption of appropriate measures to minimize windblown litter and dust during transportation of waste, such as covering trucks or transporting wastes in enclosed containers; and
- Implementation of a recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).
- Encourage collection of aluminium cans, plastic bottles and packaging material (e.g. carton boxes) and office paper by collectors. Separate labelled bins should be provided to help segregate this waste from other general refuse generated by the work force.

Clinical Waste

- Clinical waste shall be properly segregated from general refuse and stored in labelled and enclosed containers.
- Clinical waste shall be handled, stored, and disposed of in accordance with the Waste Disposal (Clinical Waste) (General) Regulation.
- Clinical waste shall be collected by licensed clinical waste collectors and transported to approved treatment and disposal facilities.
- Records of clinical waste generation and disposal shall be properly maintained.
- Clinical materials shall be used efficiently and only as necessary to minimize waste generation.
- Good housekeeping and strict hygiene practices shall be maintained in the storage area of clinical waste.

Chemical Waste

- Chemical waste shall be properly classified and labelled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.
- Chemical waste shall be stored in designated enclosed containers.
- Chemical waste shall be collected by licensed chemical waste collectors and disposed of approved chemical waste treatment facilities.
- Chemical materials shall be carefully planned, managed, and controlled to minimise surplus generation.
- The use of less hazardous or non-hazardous alternatives shall be considered where practicable.

- Regular inspection and inventory control shall be implemented to prevent deterioration, leakage or expiry of chemicals.

With the appropriate implementation of these proposed mitigation measures, no waste management implication in general refuse, clinical waste and chemical waste during operation phase is anticipated.

7 Land Contamination

7.1 Criteria and Guidelines

The relevant legislations, standards and guidelines applicable to the present study for the review of land contamination implications include:

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

7.2 Assessment Methodology

In order to identify and evaluate the potential land contamination impacts associated with the Site, a desktop study and site inspection conducted on 12 November 2025 has been undertaken to review the historical and current land uses. The following sources of information have been collected and reviewed:

- Historical aerial photographs from Survey and Mapping Office, Lands Department (LandsD);
- Hong Kong Topographic Survey maps from Survey and Mapping Office, LandsD;
- Information of the potential land contamination from LandsD, EPD and Fire Services Department (FSD);
- Site Inspection; and
- Available background information provided by the Project Proponent.

7.3 Review of Historical Photographs

Historical aerial photographs were reviewed to identify previous land uses at the Site and any previous contaminative activities. There are no identified sources of potential land contamination from previous land uses based on review of historical aerial photographs. The reviewed aerial photographs are provided in [Appendix D1](#) and summarised in [Table 7.1](#).

Table 7.1 Summary of Land Use From 1974 to 2025

Year	Ref. No.	Observations	Potential Land Contamination Observed (Yes/No)
1974	10320	The Site was a farmland.	No
1983	50907	The Site was occupied by a village house with hard paving.	No

Year	Ref. No.	Observations	Potential Land Contamination Observed (Yes/No)
1990	A21462	The land use was the same as in 1983.	No
2000	CN28337	The land use was the same as in 1990.	No
2003	CW48240	The site was occupied as a place of worship(天濟善堂)	No
2007	CS10250	The land use was the same as 2003.	No
2017	CW90396	The land use was the same as in 2007.	No
2020	E095823C	The site was occupied by a village house and enclosed structures used for residential purpose.	No
2025	E257222C	The land use was the same as in 2020.	No

According to a review of aerial photographs, the Site was farmland in 1974. From 1983 to 2000, the Site was occupied by a village house with hard paving. The Site was used as a place of worship from 2003 to 2017. Since 2020, the site has been occupied by a village house and an enclosed structure used for residential purposes. As no land-contaminating activities were identified and the Site has remained fully hard-paved, potential land contamination issues are not anticipated based on the aerial photographic record.

7.4 Information from Government Departments

Inquires to relevant government departments including EPD, FSD and LandsD are made to obtain relevant historical information regarding the potential land contamination issues regarding the Site. According to the response from EPD and FSD, no incident records of land contamination, dangerous goods licenses, fire incidents or spillage/leakage of dangerous goods were found, while the responses from LandsD are still pending. The enquiry letters and replies from relevant government department are provided in [Appendix D2](#).

7.5 Site inspection

Based on the site survey conducted on 12 November 2025, the Site is currently occupied by a village house and an enclosed structure used for residential purpose. It was observed that the Site is fully paved by concrete slabs while the ground condition is good. The site walkover checklist and photo records are provided in [Appendix D3](#). No land-contaminating activities or potential contamination issues were identified on the Site. Thus, no land contamination issues are anticipated in the Site.

8 Conclusion

The Environmental Assessment (EA) is prepared to identify all potential environmental impacts and relevant environmental requirements due to the construction and operation of the Proposed Development.

Air Quality

The potential sources of air quality impact associated with the proposed construction activities include construction works, which will be expected to generate construction dust and gaseous emission. With the implementation of the recommended mitigation measures and good site practices, adverse air quality impact is not anticipated during the construction phase.

The required buffer distance of 5m, 10m and 20m for Tuen Fu Road, Castle Peak Road – Lingnan and Tuen Mun Road, respectively, can be fulfilled and no air-sensitive use including openable window, fresh air intake and recreational use in open space shall be located within the buffer zone. Therefore, no adverse air quality impacts associated with vehicular emission on the Site is anticipated.

No chimneys will be provided in the Proposed Development. As a result, no adverse air quality impact is anticipated.

Although a carpark is proposed in the Proposed Development, the ventilation system will be designed in accordance with the requirements stipulated in ProPECC PN 2/96. As such, no adverse air quality impact is anticipated.

Since no air quality impact and odour emission sources are identified within the 500m assessment area of the Site, adverse air quality impact arising from the surrounding is not anticipated.

Noise

The road traffic noise impact was assessed based on the projected peak hour flow for the worst year within 15 years from the date of occupancy. The predicted traffic noise levels at all NSRs with full compliance with the HKPSG standard of 70 dB(A) with the implementation of the proposed mitigation measures, including the application of acoustic windows. Hence, no adverse traffic noise impact is anticipated.

The predicted rail noise levels at all representative NSRs comply with the noise standard of 55 dB(A) in IND-TM and the HKPSG criteria of Leq(24hr) and Lmax(2300–0700). Thus, no adverse rail noise impact is expected from the nearby railway.

Site survey and noise measurements were conducted to identify the existing fixed noise sources in the vicinity of the Proposed Development. Based on the results, the predicted noise level at all NSRs complies with the noise criteria as stipulated in IND-TM (i.e. 65dB(A) for daytime and evening time and 55dB(A) for nighttime). Therefore, no existing fixed noise sources impact is anticipated.

Water Quality

The potential impacts of water quality arising from the construction and operation phase of the Site have been identified and evaluated. With implementation of recommended mitigation measures, no adverse water quality impact is anticipated during construction phase.

During operation phase, the sewage/wastewater generated from the Proposed Development will be discharged to the public sewer and the run-off will be conveyed to the stormwater drain. The sewer and drain connection from the Site to the public sewerage and drainage system will be constructed and completed before the operation of the Site. With the mitigation measures proposed above, no adverse water quality impact during operation phase is anticipated.

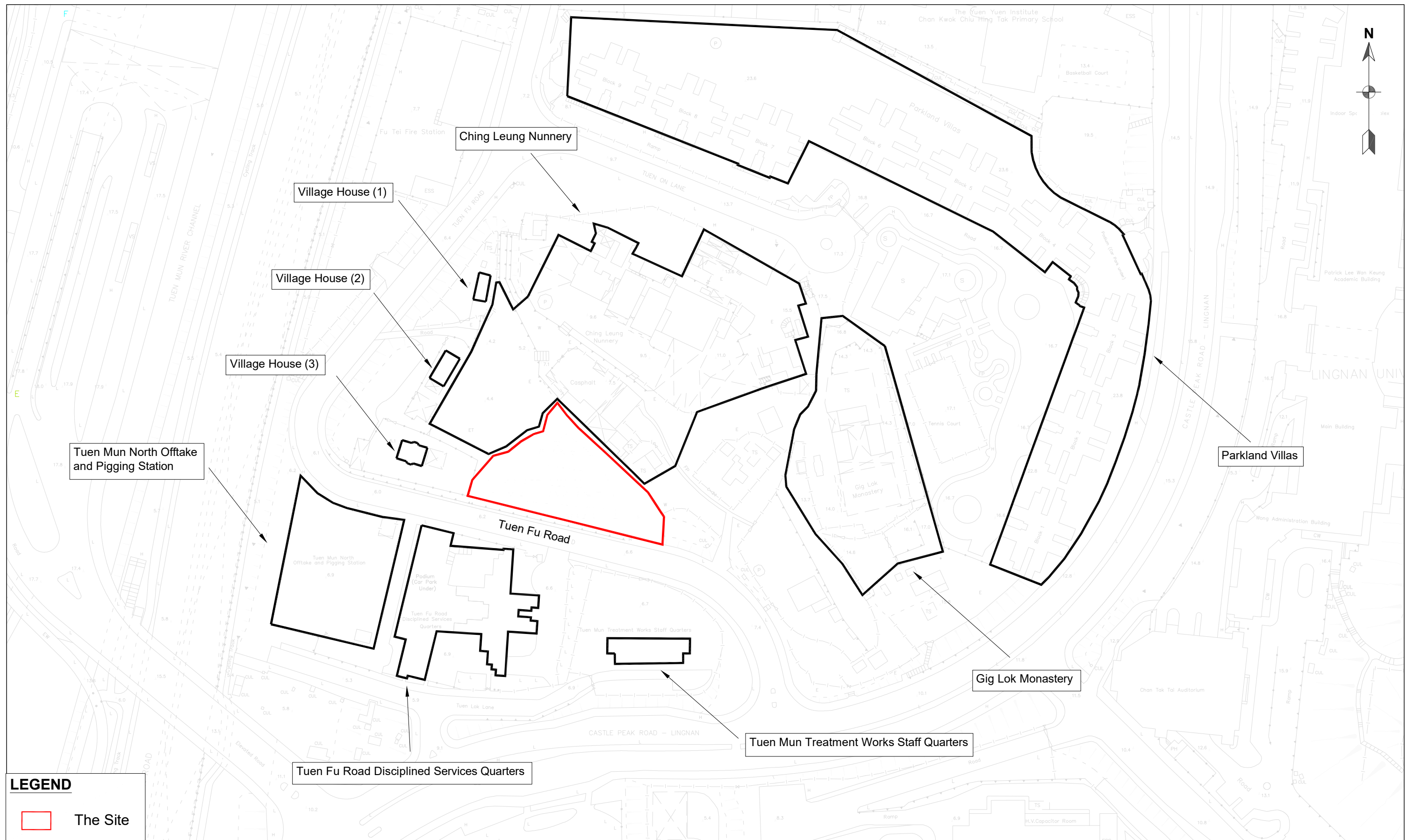
Waste Management

The potential impacts of waste arising from construction and operation phases of the Proposed Development have been assessed. With the implementation of waste management measures, waste generated/disposed of the Proposed Development should not lead to any adverse impact.

Land Contamination

Based on the review of historical aerial photographs, information provided by the government departments and site visits, no land contaminating activities are identified at the Site. Thus, it is expected that there will be no potential land contamination issues at the Site.

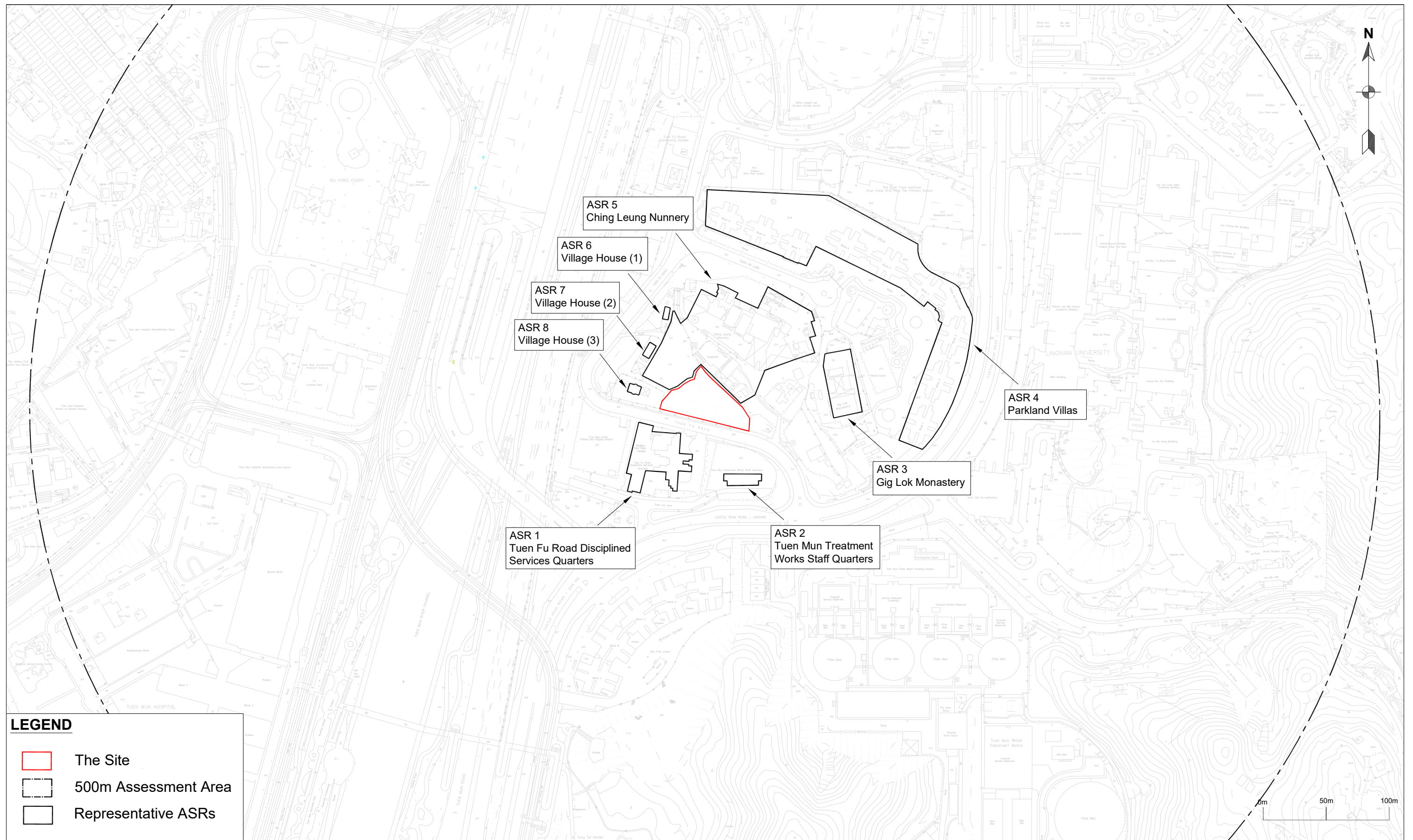
Figure



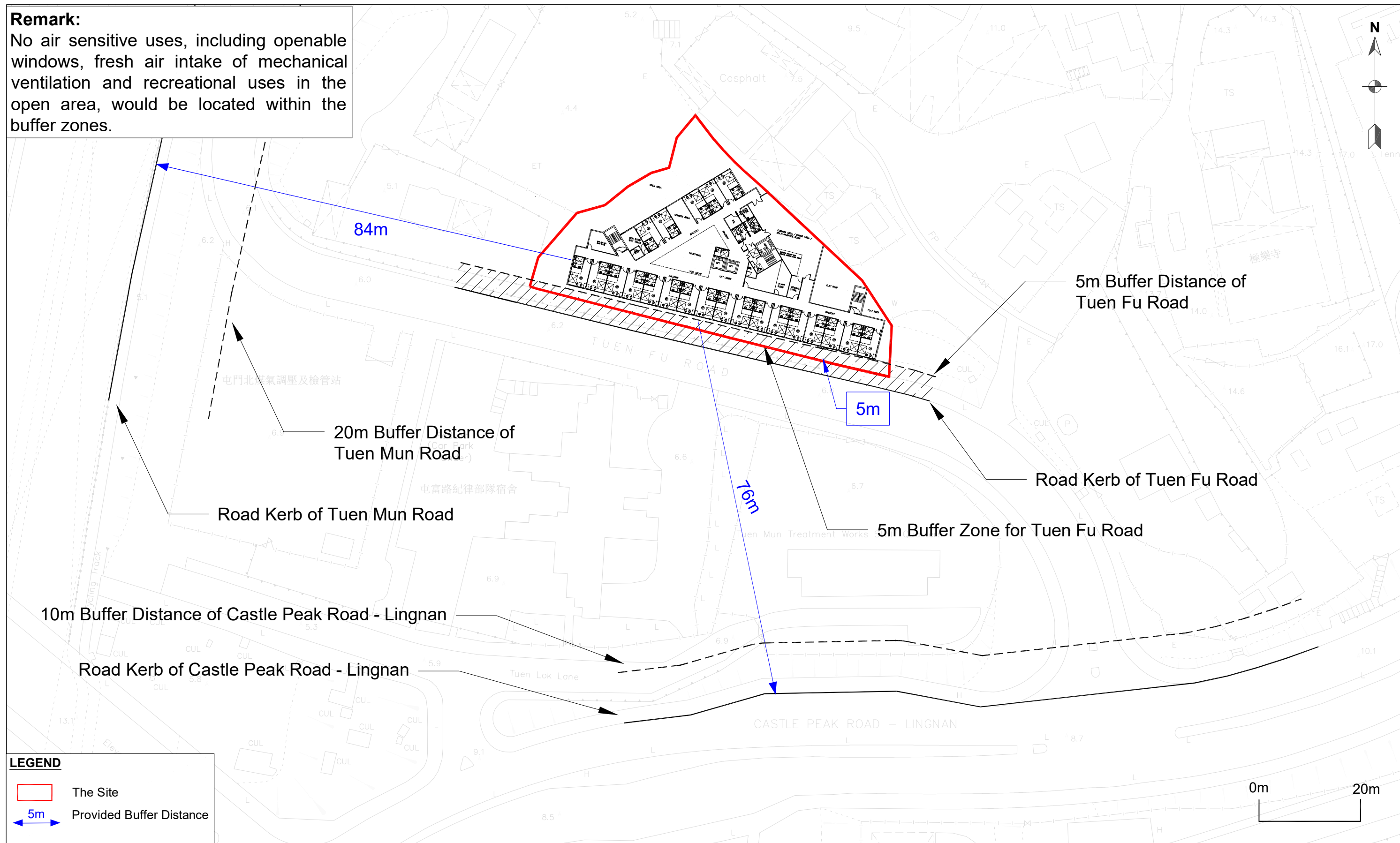
Section 12A Application for Proposed Rezoning from "Government, Institution or Community" to "Government, Institution or Community (6)" at Tuen Mun, New Territories and to Amend the Notes of the Zone Applicable to the Site for the Proposed Social Welfare Facility (Residential Care Home for the Elderly) at Section C of Lot No. 496 in D.D 132 and the adjoining Government Land, Tuen Mun, New Territories

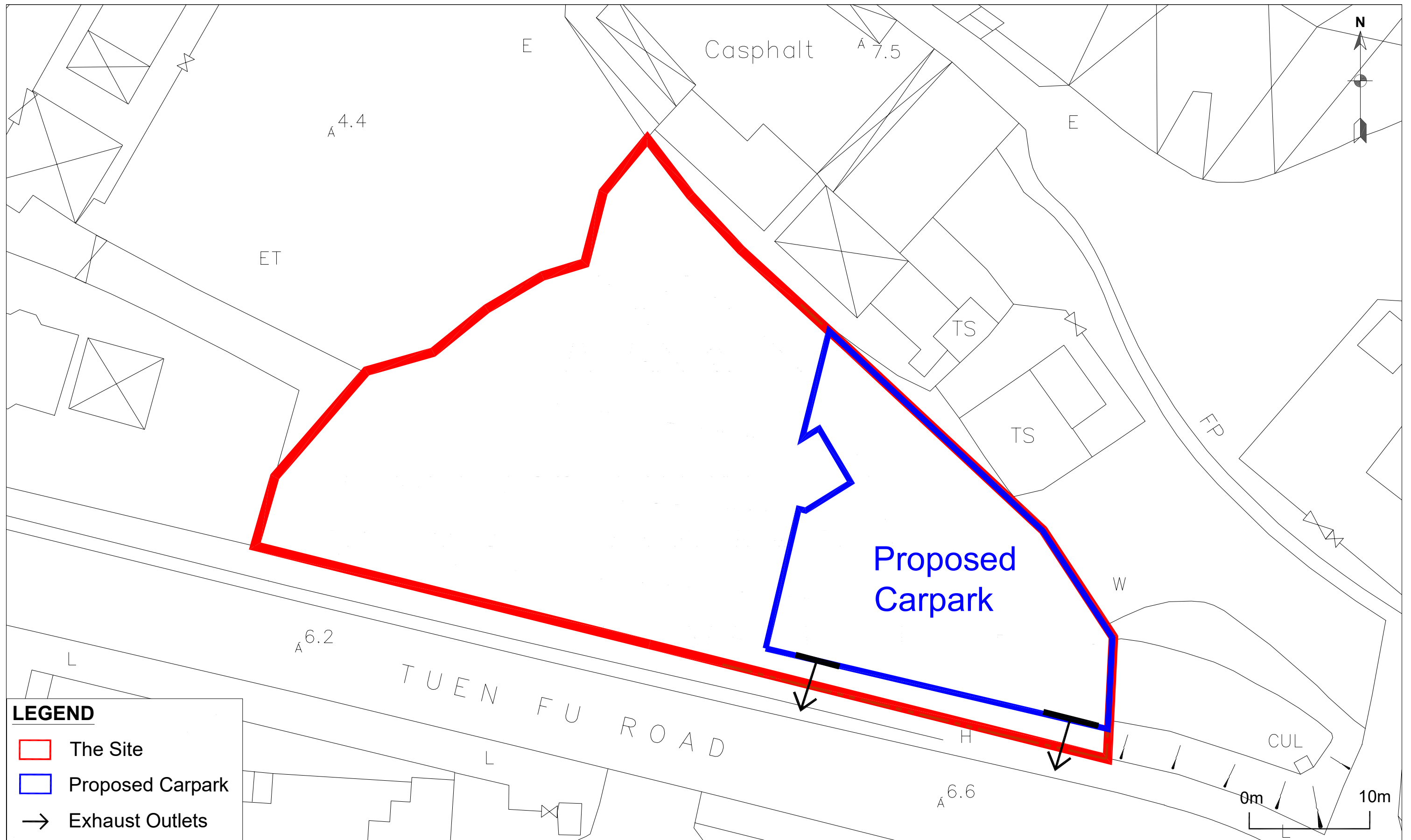
Figure 2.1

Rev. 1



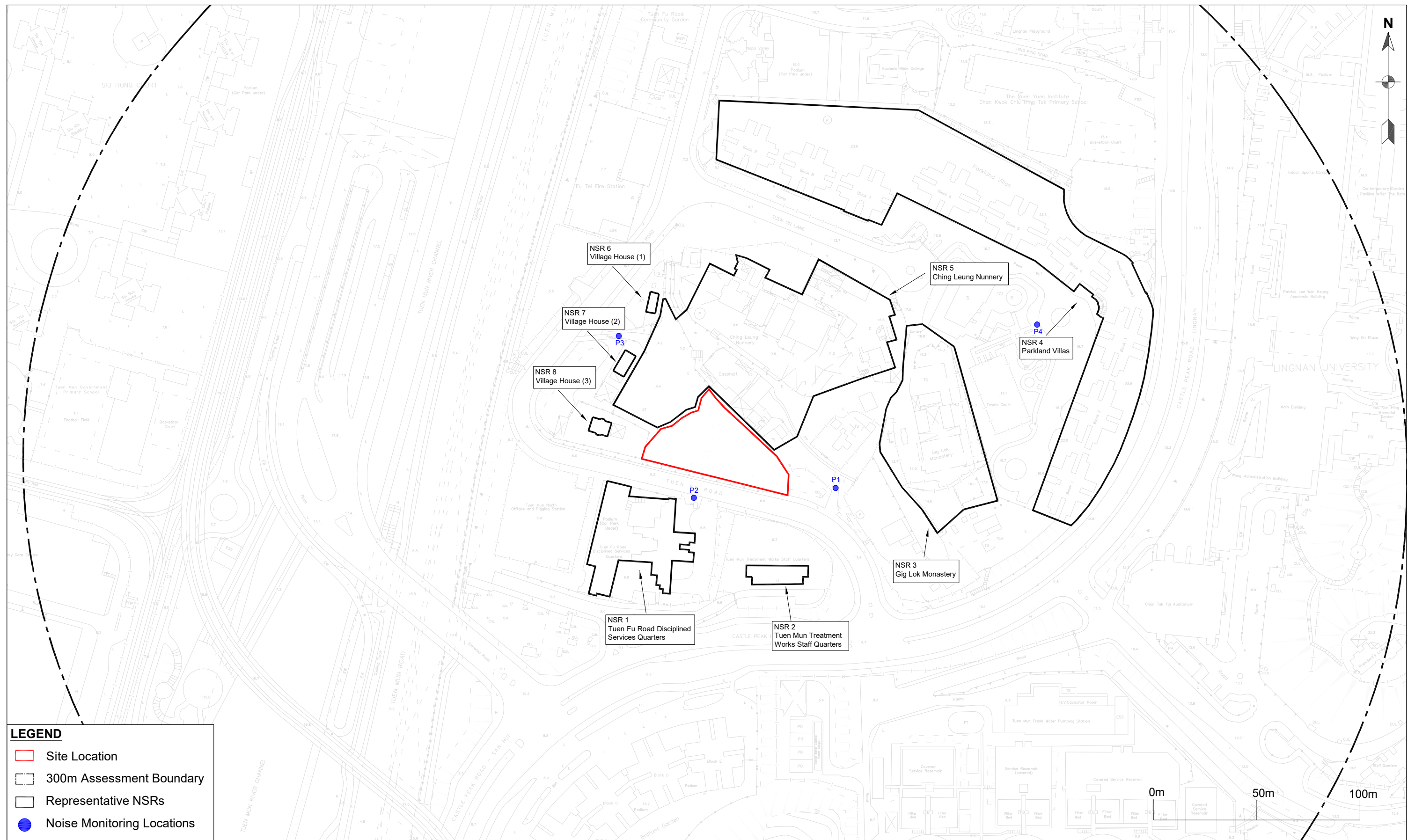
Remark:
No air sensitive uses, including openable windows, fresh air intake of mechanical ventilation and recreational uses in the open area, would be located within the buffer zones.

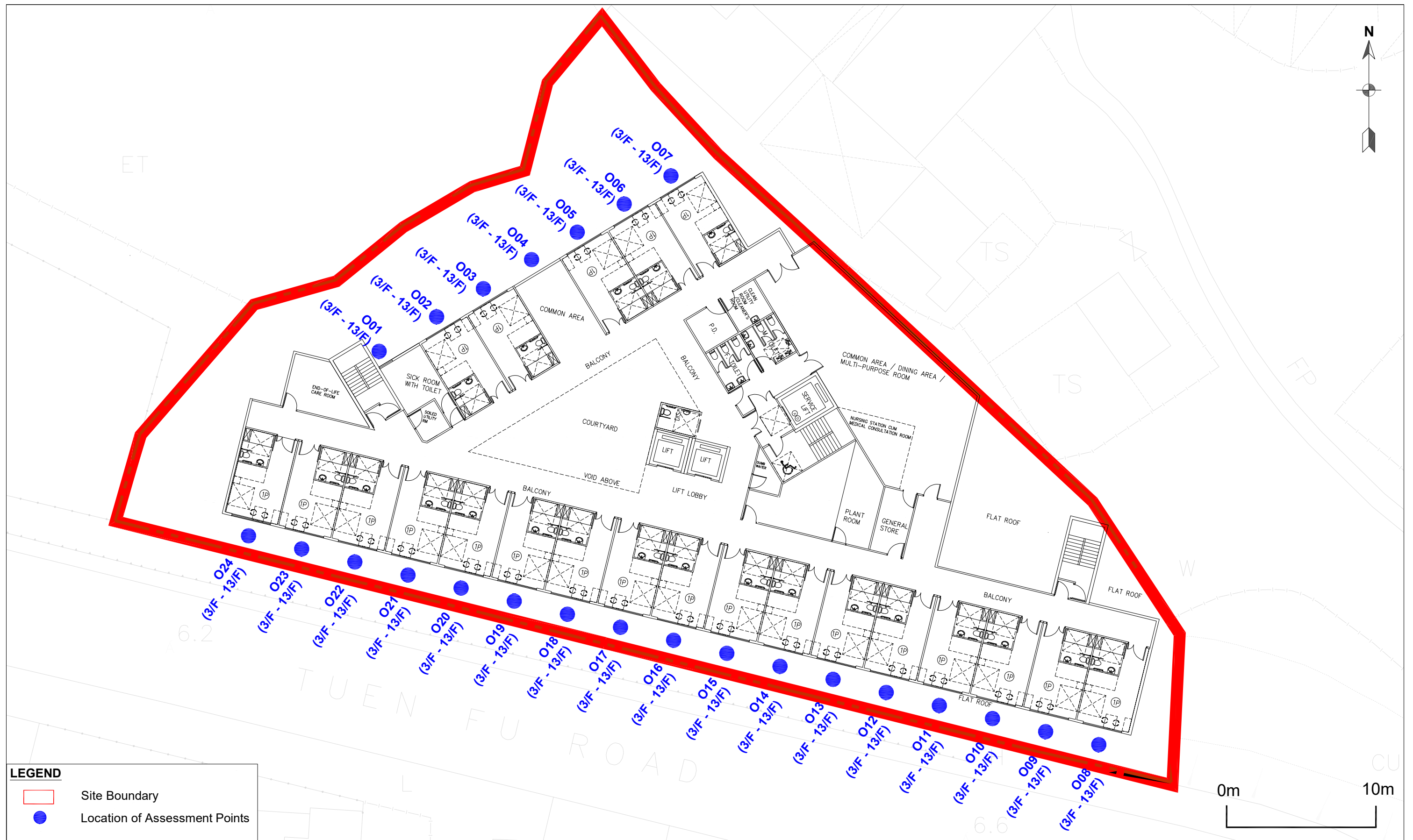


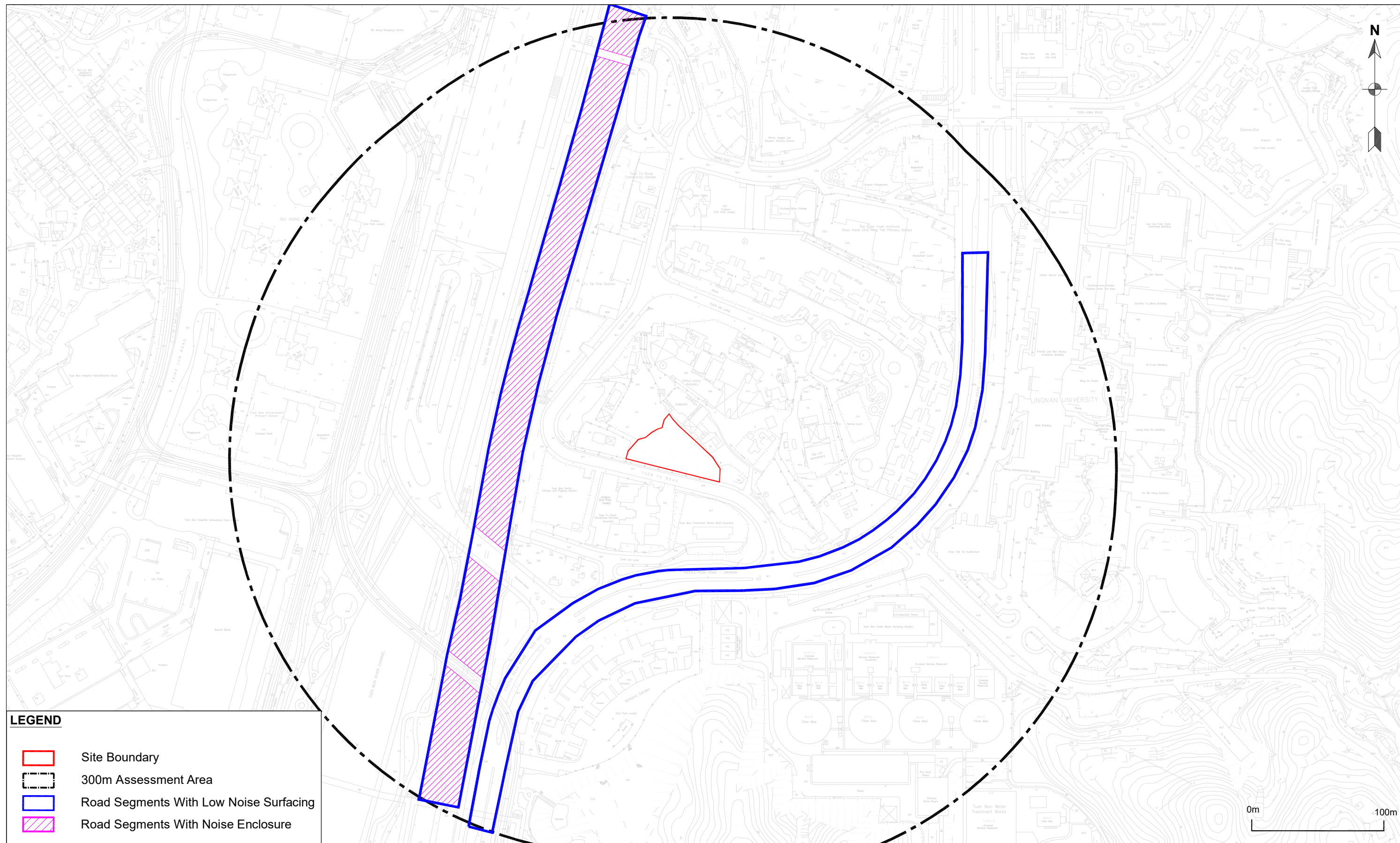


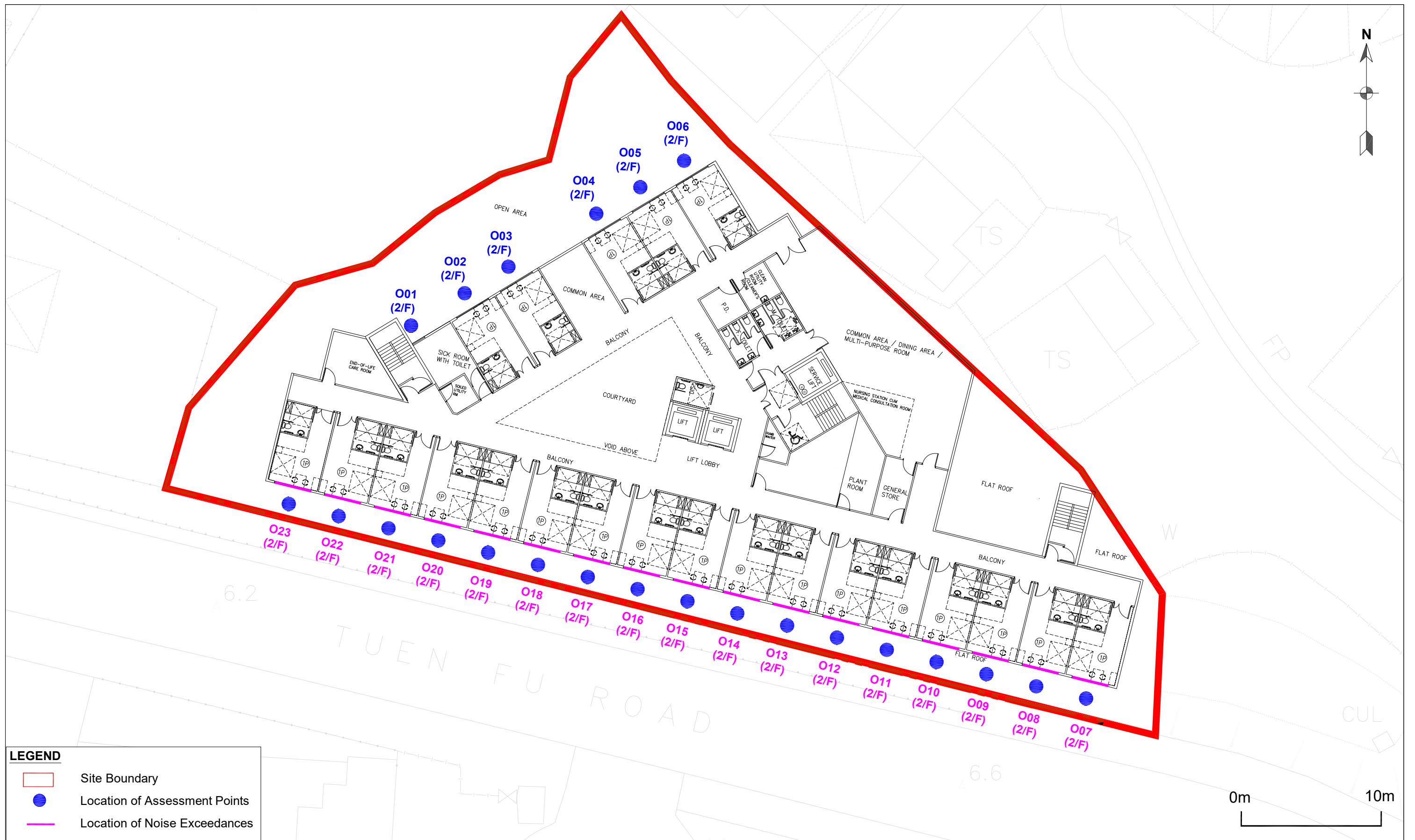
LEGEND

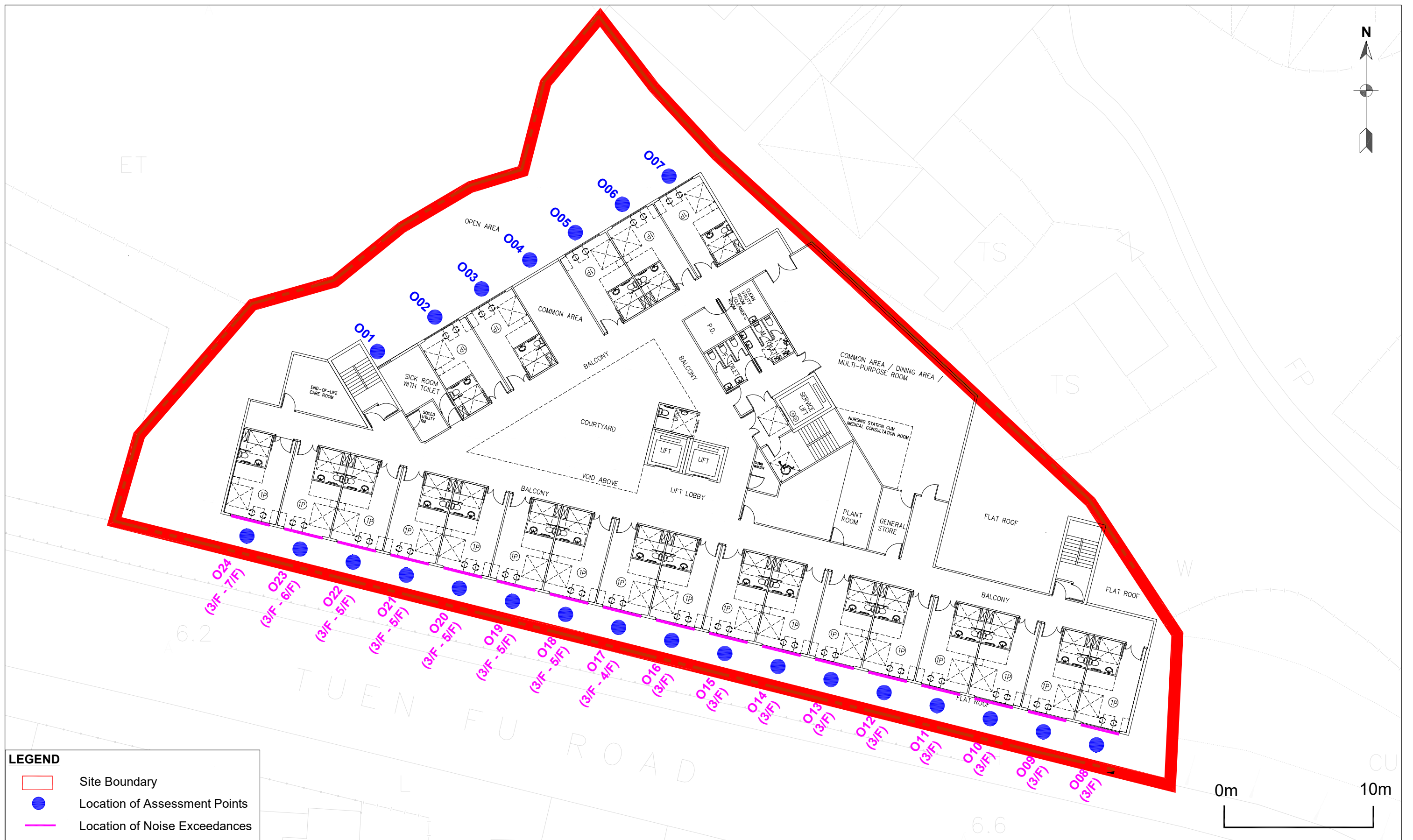
- The Site
- Proposed Carpark
- Exhaust Outlets











LEGEND

- Site Boundary
- Location of Assessment Points
- Location of Noise Exceedances

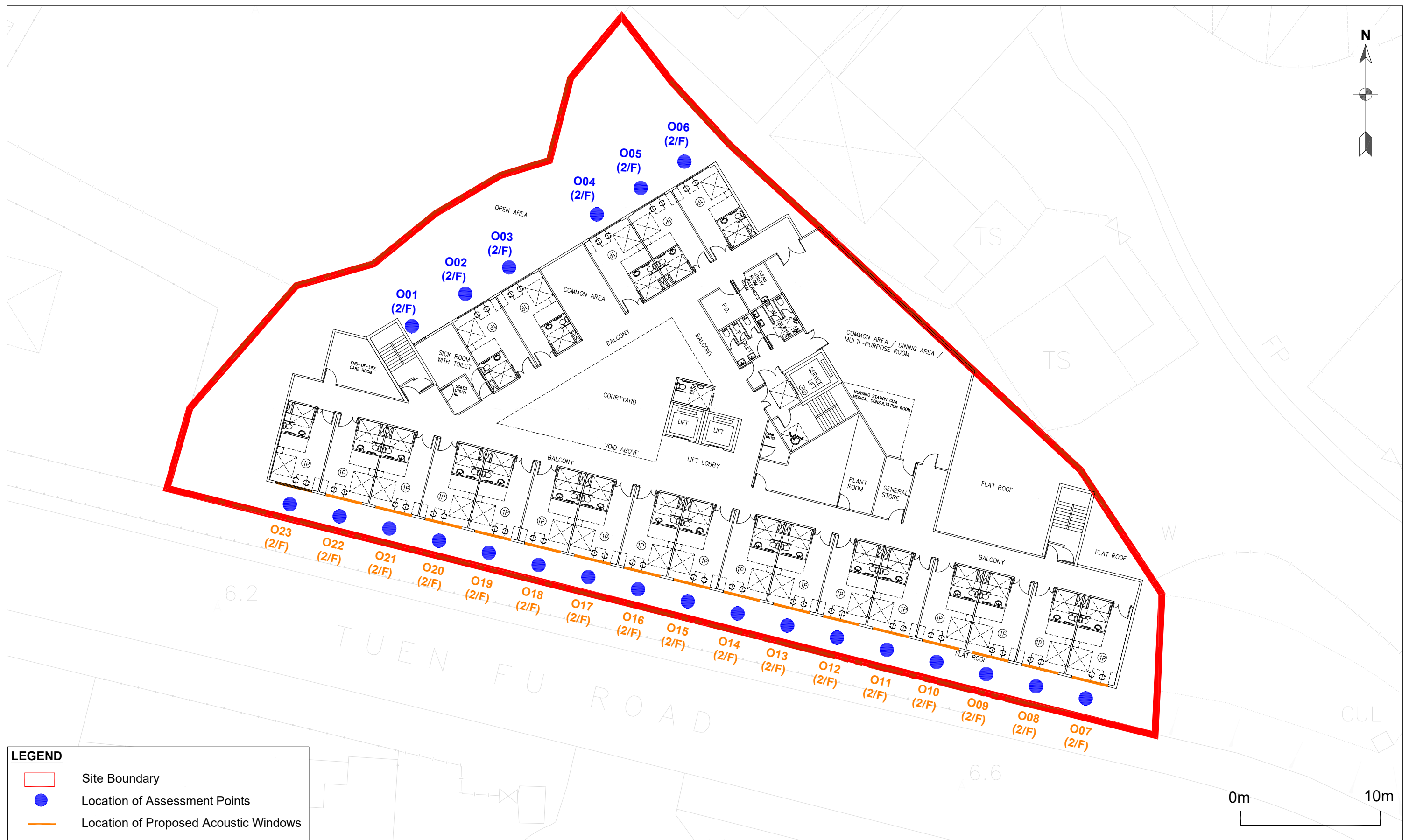


Section 12A Application for Proposed Rezoning from "Government, Institution or Community" to "Government, Institution or Community (6)" at Tuen Mun, New Territories and to Amend the Notes of the Zone Applicable to the Site for the Proposed Social Welfare Facility (Residential Care Home for the Elderly) at Section C of Lot No. 496 in D.D 132 and the adjoining Government Land, Tuen Mun, New Territories

Location of Assessment Points and Predicted Noise Exceedances on 3/F - 13/F

Figure 4.6

Rev. 0

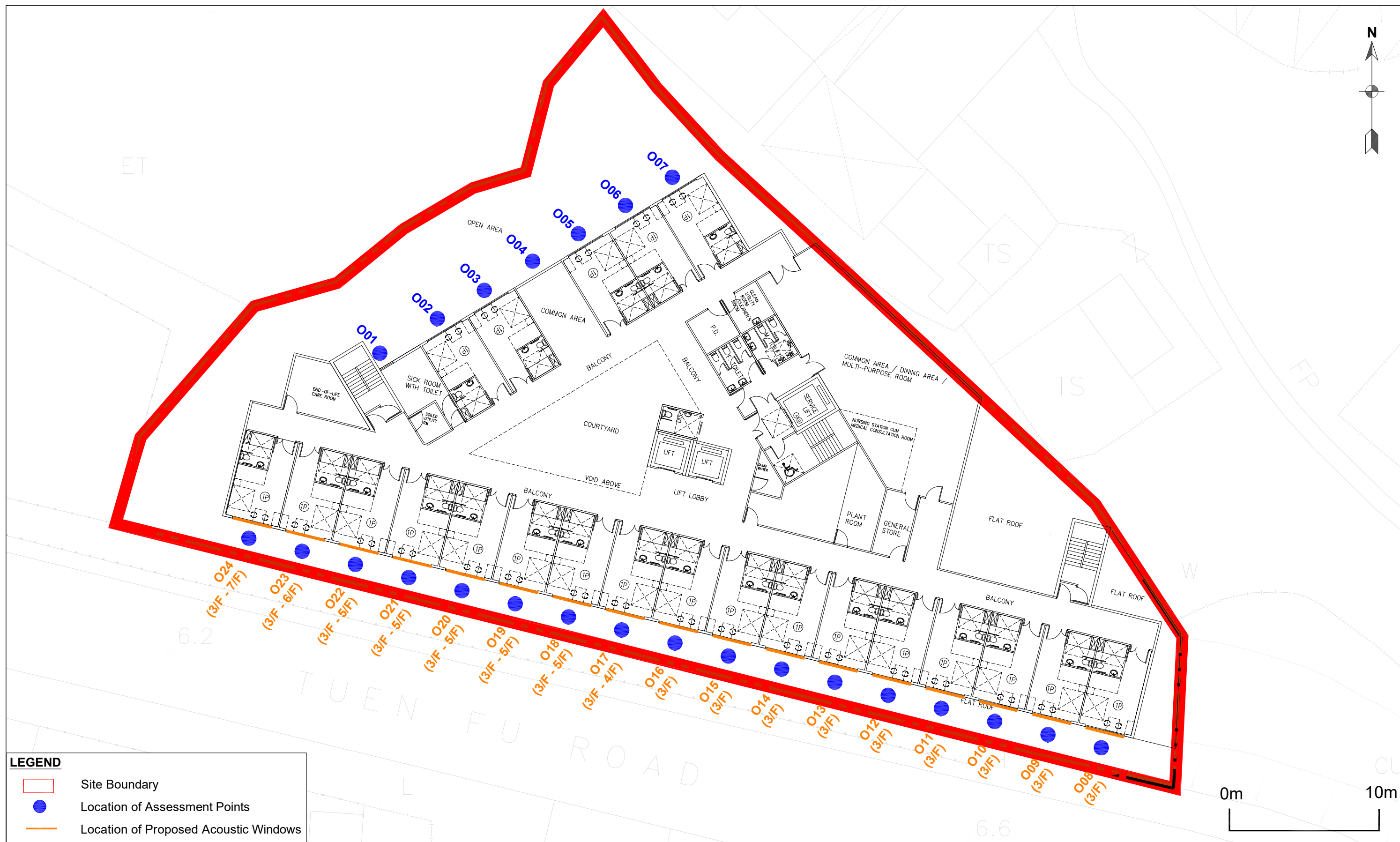


Section 12A Application for Proposed Rezoning from "Government, Institution or Community" to "Government, Institution or Community (6)" at Tuen Mun, New Territories and to Amend the Notes of the Zone Applicable to the Site for the Proposed Social Welfare Facility (Residential Care Home for the Elderly) at Section C of Lot No. 496 in D.D 132 and the adjoining Government Land, Tuen Mun, New Territories

Figure 4.7

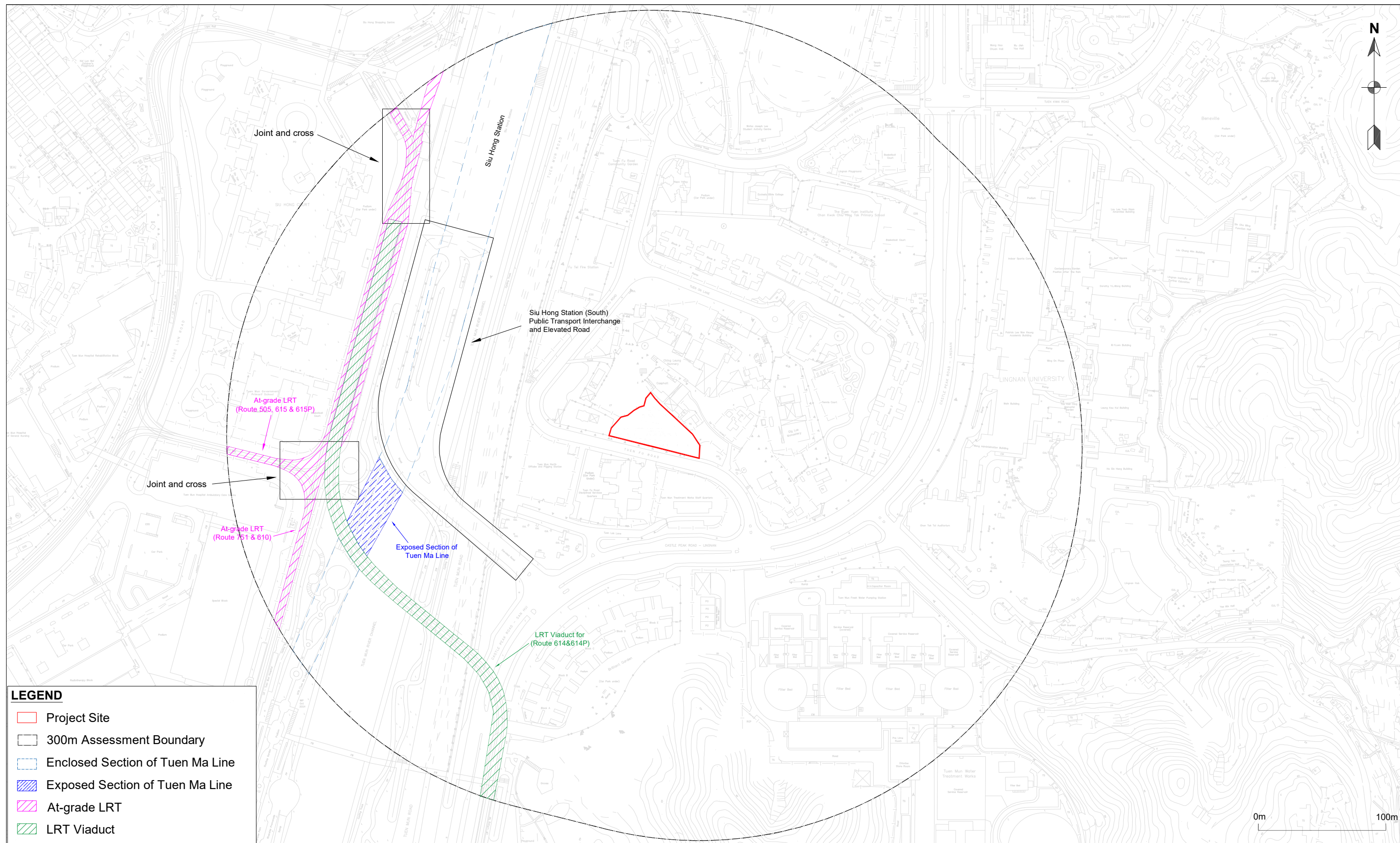
Rev. 0

Location of Proposed Mitigation Measures on 2/F



LEGEND

- Site Boundary
- Location of Assessment Points
- Location of Proposed Acoustic Windows





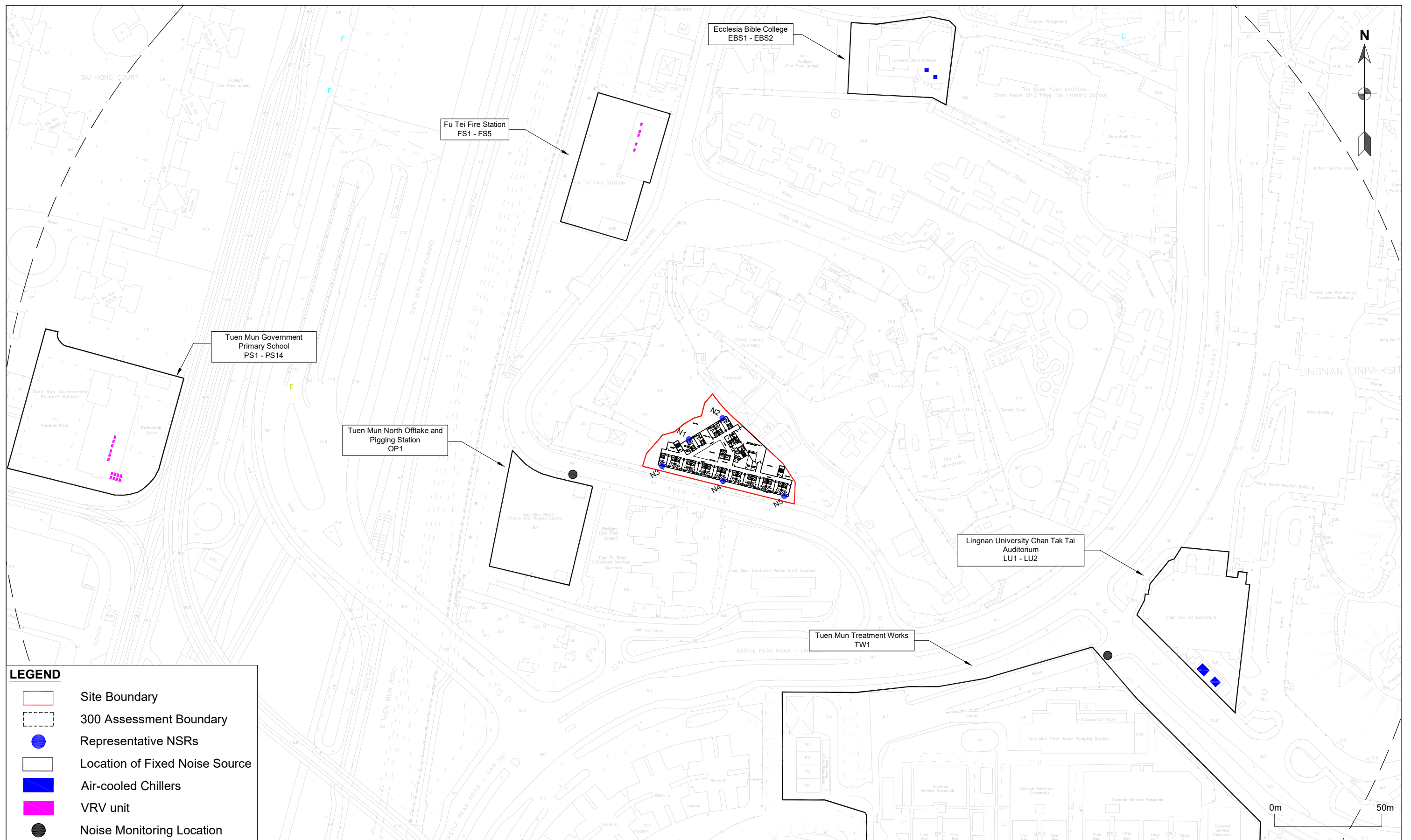
Section 12A Application for Proposed Rezoning from "Government, Institution or Community" to "Government, Institution or Community (6)" at Tuen Mun, New Territories and to Amend the Notes of the Zone Applicable to the Site for the Proposed Social Welfare Facility (Residential Care Home for the Elderly) at Section C of Lot No. 496 in D.D 132 and the adjoining Government Land, Tuen Mun, New Territories

Figure 4.10

Rev. 0

Location of Representative NSRs for Railway Noise Assessment



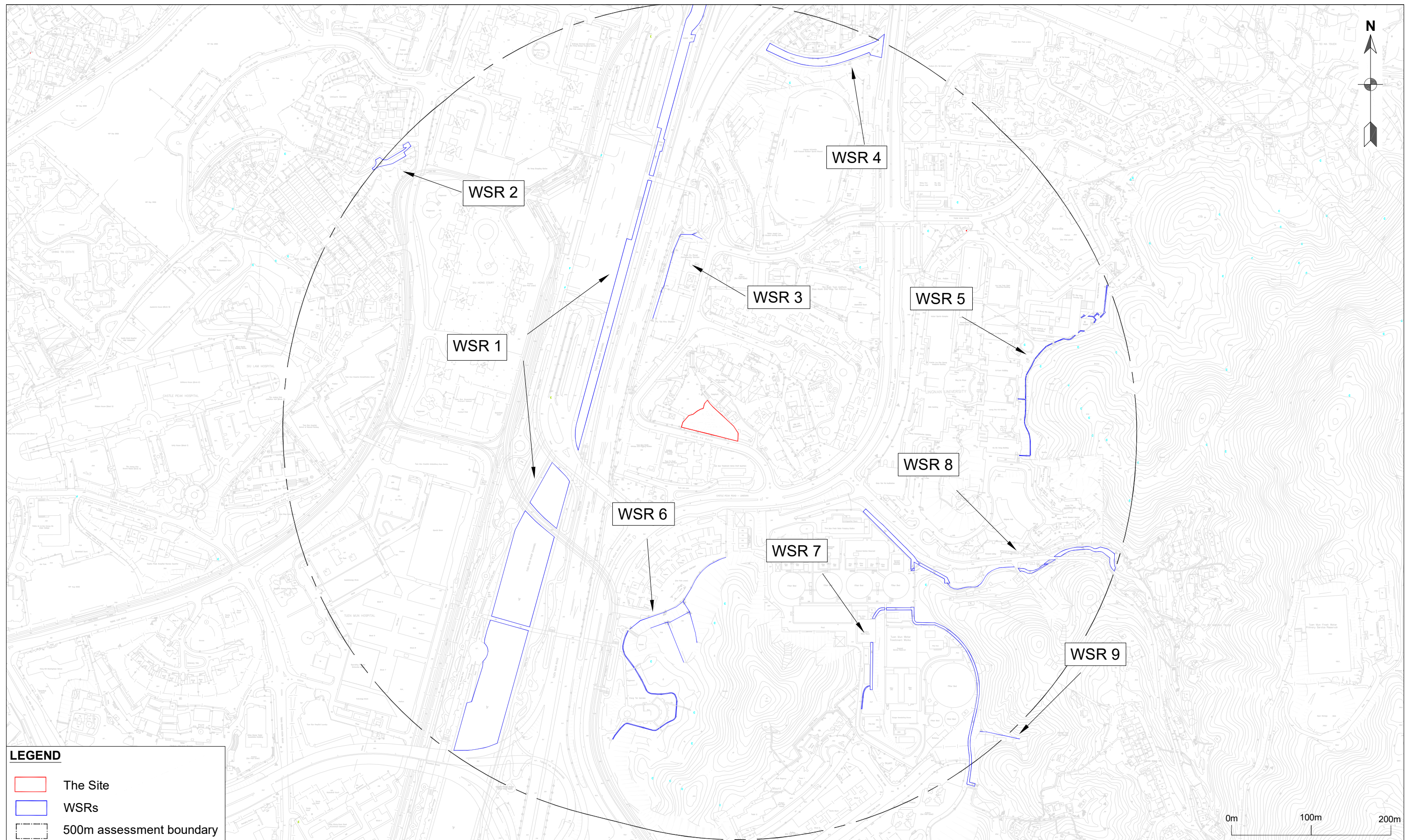


Section 12A Application for Proposed Rezoning from "Government, Institution or Community" to "Government, Institution or Community (6)" at Tuen Mun, New Territories and to Amend the Notes of the Zone Applicable to the Site for the Proposed Social Welfare Facility (Residential Care Home for the Elderly) at Section C of Lot No. 496 in D.D 132 and the adjoining Government Land, Tuen Mun, New Territories

Figure 4.12

Rev. 0

Location of Existing Fixed Noise Sources and Noise Monitoring Location

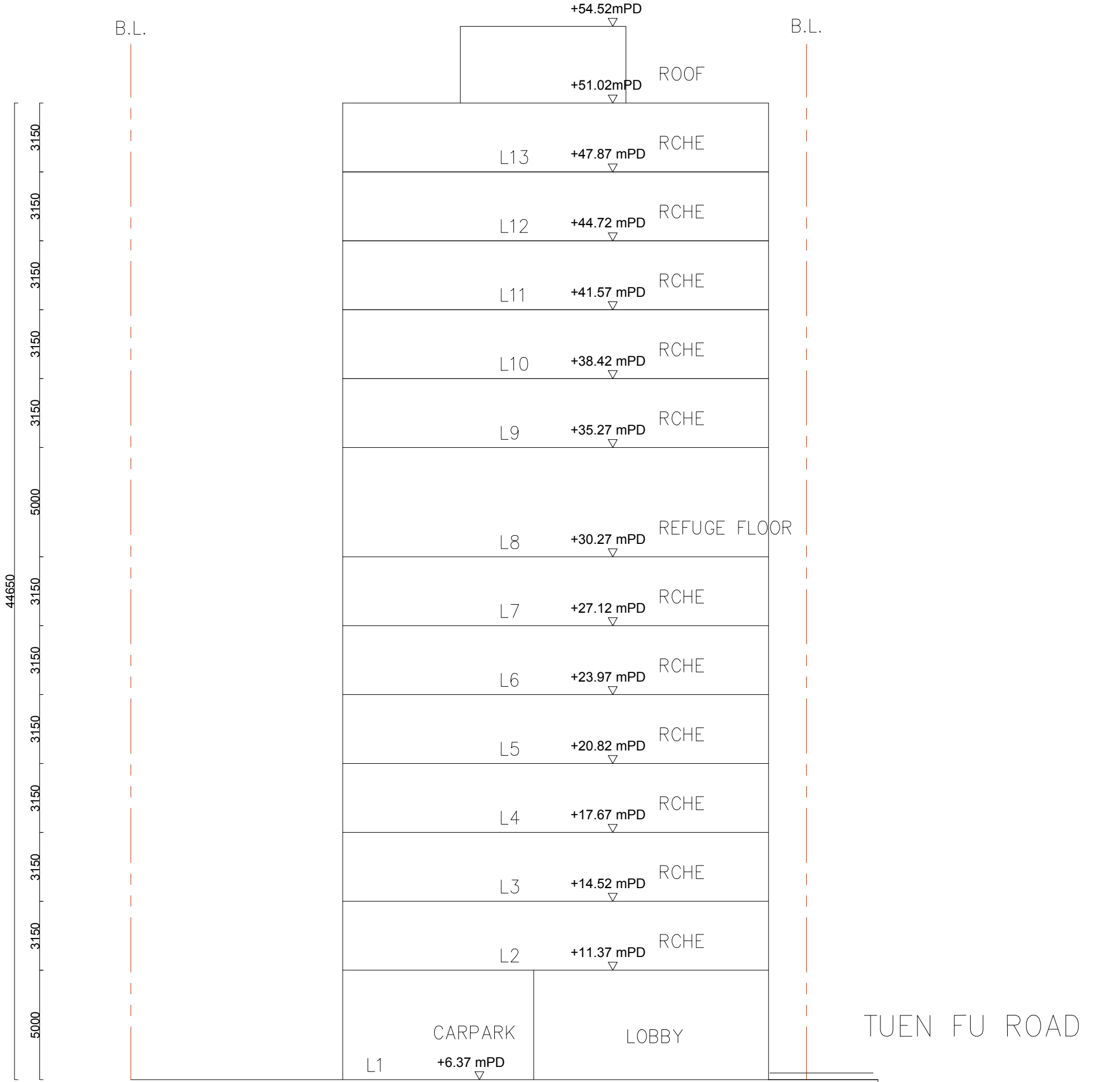


Appendix A

Proposed Layout Plan



KO BUILDING CONSULTANCY LIMITED



- SECTIONAL DIAGRAM
SCALE: 1:200 (A3)

B.D. REF.

F.S.D. REF.

NOTES:

1. WORK FROM FIGURED DIMENSIONS ONLY.

2. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BY THE CONTRACTOR.

3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT SPECIFICATIONS CONDITIONS OF CONTRACT AND ALL OTHER RELEVANT DRAWINGS. THE AUTHORIZED PERSON / REGISTERED STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.

4. THIS IS DRAWING IS NOT VALID FOR CONSTRUCTION OR OTHER PURPOSES UNLESS IT HAS BEEN SIGNED BY THE AUTHORIZED PERSON / REGISTERED STRUCTURAL ENGINEER.

5. ALL WORKS SPECIFIED ON THIS DRAWING SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH PROVISIONS OF THE BUILDINGS ORDINANCE AND REGULATIONS.

6. COPYRIGHT OF THIS DRAWING IS RESERVED BY THE AUTHORIZED PERSON / REGISTERED STRUCTURAL ENGINEER. NO PORTION OF THIS DRAWING MAY BE REPRODUCED WITHOUT HIS WRITTEN CONSENT.

7. DRAWINGS DEVIATED FROM THE LATEST REVISION SHOULD BE CANCELLED.

Rev.	Description	Date	Checked

Project Title :

SECTION 12A APPLICATION FOR PROPOSED REZONING FROM "GOVERNMENT, INSTITUTION OR COMMUNITY" TO "GOVERNMENT, INSTITUTION OR COMMUNITY (6)" AT TUEN MUN, NEW TERRITORIES AND TO AMEND THE NOTES OF THE ZONE APPLICABLE TO THE SITE FOR THE PROPOSED SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) AT SECTION C OF LOT NO. 496 IN D.D. 132 AND THE ADJOINING GOVERNMENT LAND, TUEN MUN, NEW TERRITORIES

Drawing Title :

SECTIONAL DIAGRAM

CLIENT

PARK NATURE

DRAWN	DATE	CHECKED	SCALE
SY	JUN 2026	EK	

JOB NO. :	DRAWING NO.
-	A-005
REVISION	

| 2 | |

AUTHORIZED PERSON :


KO BUILDING CONSULTANCY LIMITED

Appendix B1

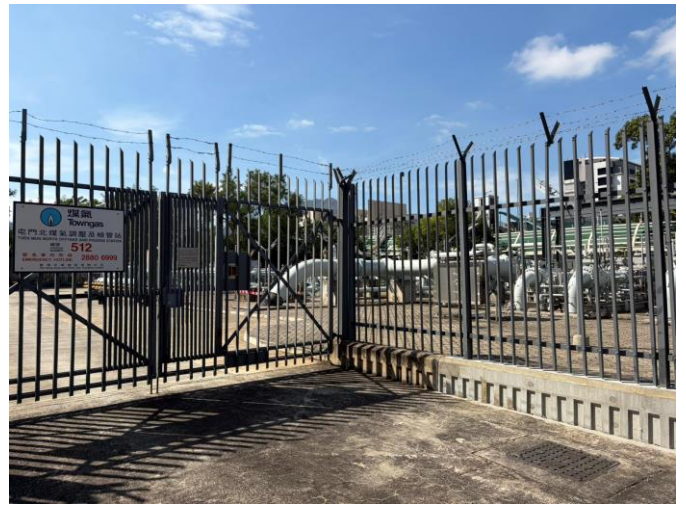
Photo Records for Site Inspection Conducted on 12
November 2025 and 27 March 2026

Photo-documentation of Site Inspection on 12 November 2025



Tuen Mun Water Treatment Works (P01)

No air quality impact or odorous emissions are identified in Tuen Mun Water Treatment Works.



Tuen Mun North Offtake and Pigging Station (P02)

No air quality impact or odorous emissions are identified in Tuen Mun North Offtake and Pigging Station.



Ching Leung Nunnery (P03)

The entrance of Ching Leung Nunnery is located to the northwest of the Site.



Ching Leung Nunnery (P04)

No air quality impact or odorous emissions are identified in Ching Leung Nunnery.

Photo-documentation of Site Inspection on 12 November 2025



Gig Lok Monastery (P05)

The Gig Lok Monastery is located to northeast of the Site.
No adverse air quality impact is observed.

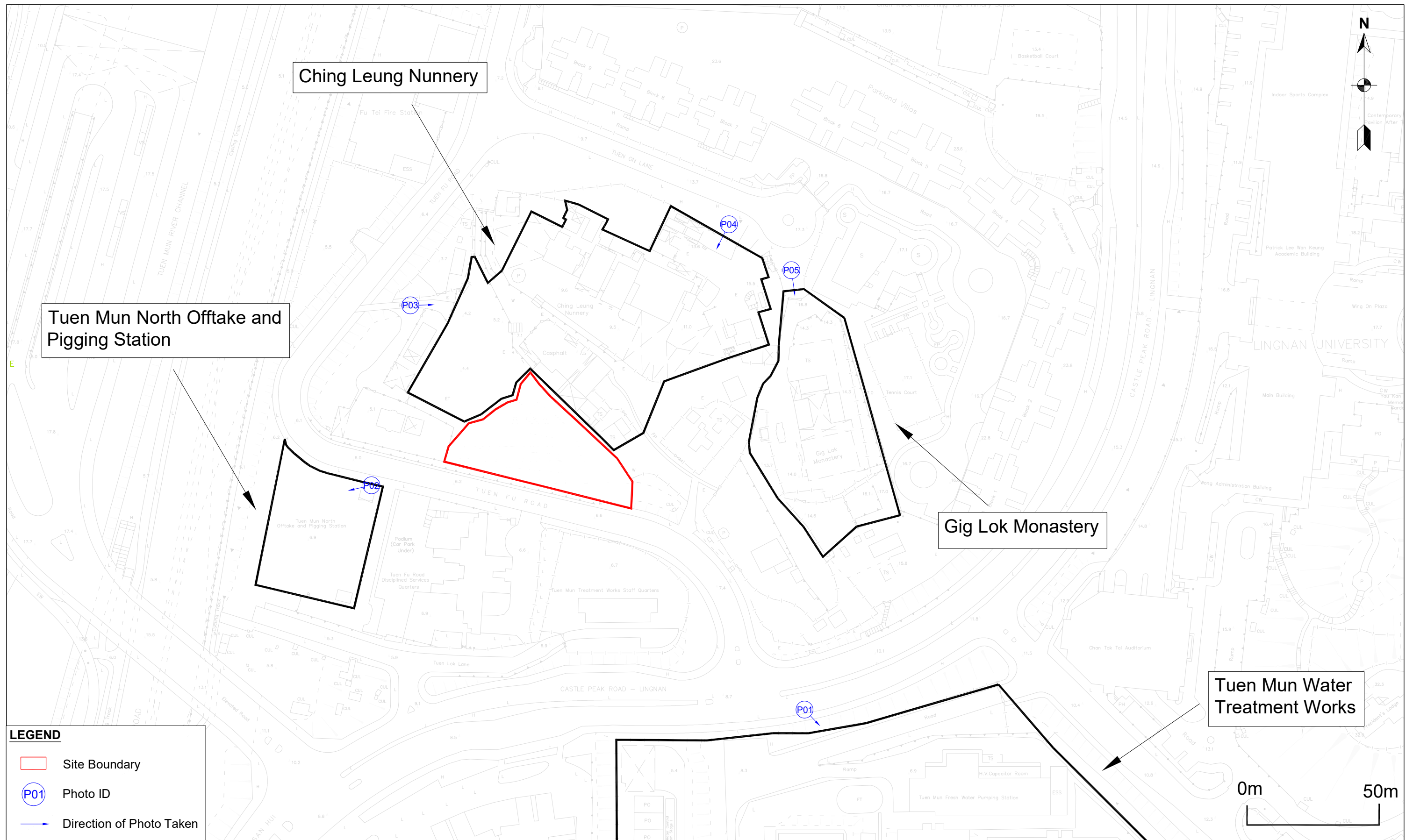


Photo-documentation of Site Inspection on 27 March 2026



Tuen Mun Water Treatment Works (P01)

No air quality impact or odorous emissions are identified in Tuen Mun Water Treatment Works.



Tuen Mun North Offtake and Pigging Station (P02)

No air quality impact or odorous emissions are identified in Tuen Mun North Offtake and Pigging Station.



Tuen Mun North Offtake and Pigging Station (P03)

The Tuen Mun North Offtake and Pigging Station comprise gas transmission infrastructure that are operated as a closed system. No air quality impact or odorous emissions are identified.



Ching Leung Nunnery (P04)

The entrance of Ching Leung Nunnery is located to the northwest of the Site.

Photo-documentation of Site Inspection on 27 March 2026



Ching Leung Nunnery (P05)

The area located to the northwest of the Site, immediately beyond the entrance to Ching Leung Nunnery, is abandoned land partially covered by vegetation



Ching Leung Nunnery (P06)

Part of Ching Leung Nunnery has been rented to a non-governmental organization (NGO), namely 'School of Everyday Life', for educational purposes. The NGO is located to the northeast of the Site.



Ching Leung Nunnery (P07)

No air quality impact or odorous emissions are identified in 'School of Everyday Life'.



Ching Leung Nunnery (P08)

The Ching Leung Nunnery comprises a Buddhist Hall for worship and prayers. According to the information provided by the staff of the Buddhist Hall, no burning of joss paper is carried out within Ching Leung Nunnery.

Photo-documentation of Site Inspection on 27 March 2026



Ching Leung Nunnery (P09)

The Ching Leung Nunnery also comprise village-type housing for residential use. No air quality impact or odorous emissions are identified.



Ching Leung Nunnery (P10)

The Ching Leung Nunnery also comprise village-type housing for residential use. No air quality impact or odorous emissions are identified.



Ching Leung Nunnery (P11)

The Ching Leung Nunnery also comprise a dining area for worshipers to partake in vegetarian meals on special occasions.



Ching Leung Nunnery (P12)

The Ching Leung Nunnery also comprise a dining area for worshipers to partake in vegetarian meals on special occasions. No air quality impact or odorous emissions are identified.

Photo-documentation of Site Inspection on 27 March 2026



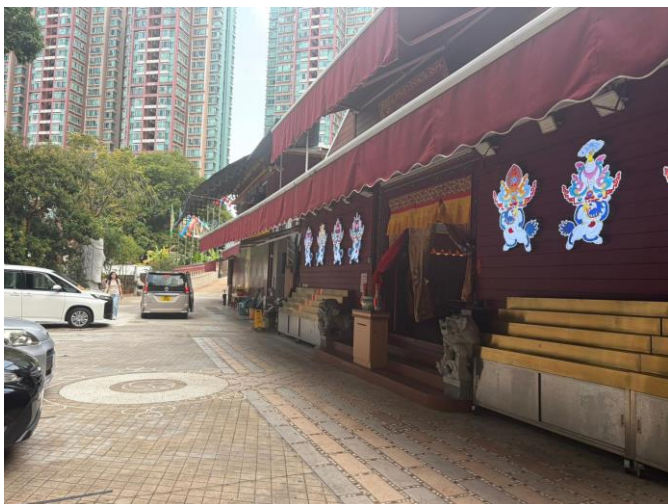
Gig Lok Monastery (P13)

The Gig Lok Monastery is located to northeast of the Site. It primarily serves as a columbarium, a place of worship and dormitory for staff.



Gig Lok Monastery (P14)

The Gig Lok Monastery is located to northeast of the Site. It primarily serves as a columbarium, a place of worship and dormitory for staff. No burning of joss paper is observed in the monastery.



Gig Lok Monastery (P15)

According to the information provided by the staff of the monastery, burning of joss paper is prohibited in the monastery. No air polluting activities are observed in the monastery.

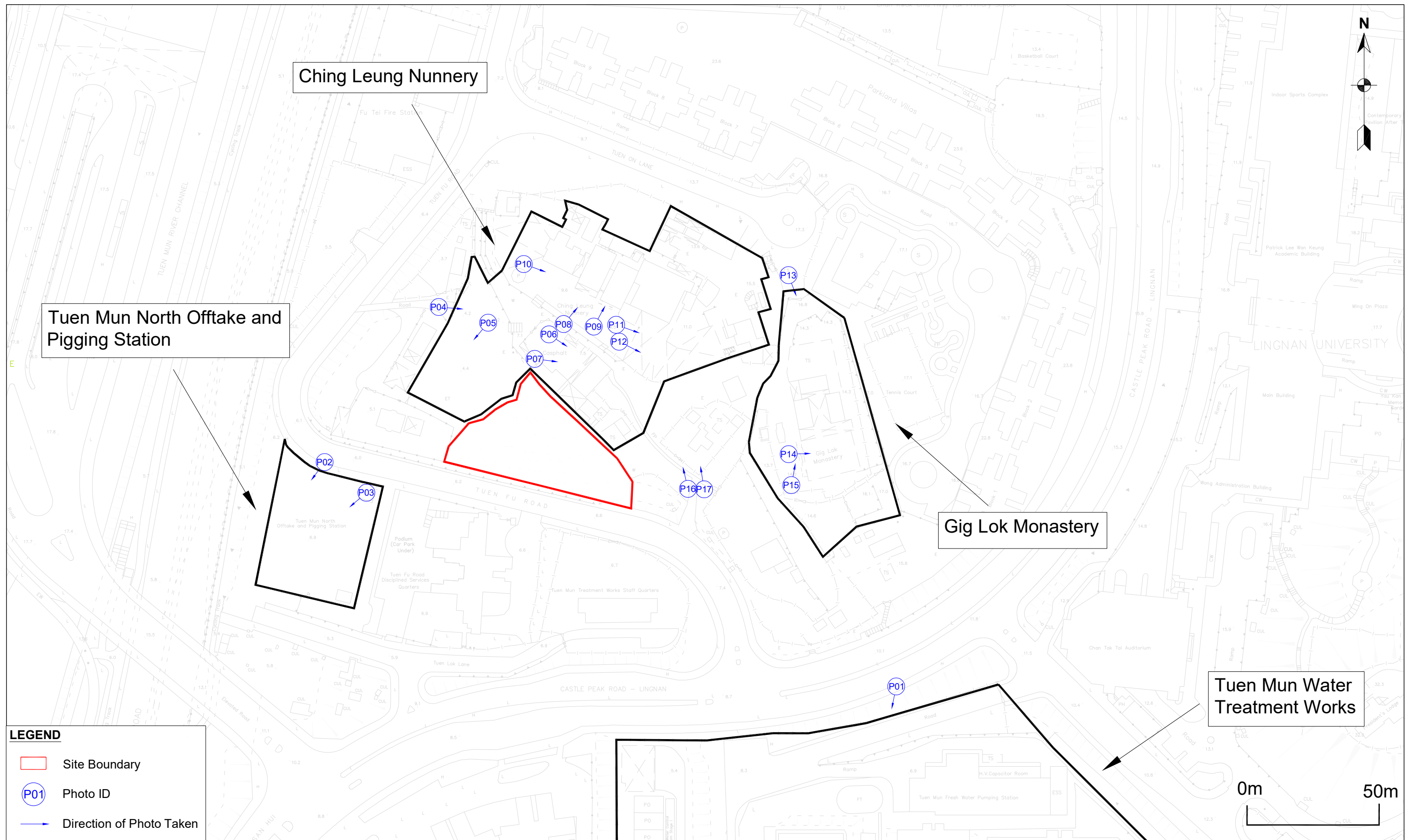


Temporary Structures to the northeast of the Site (P16)

The area located to the northeast of the Site serves as an open car parking area.

Photo-documentation of Site Inspection on 27 March 2026

	
<u>Temporary Structures to the northeast of the Site (P17)</u> The area located to the northeast of the Site serves as an open car parking area. An enclosed structure for storage is observed.	



Appendix B2

Email Enquiry to WSD

Yan Lee

From: Cheryl Chan
Sent: 2026年3月27日星期五 14:27
To: 'sb_chan@wsd.gov.hk'
Cc: Joan Choi; Yan Lee
Subject: Request for information about Tuen Mun Water Treatment Works_EA & SIA
Attachments: department_comment_Pre-submission_on_s.16 application, Lot 496_dated 20.3.2026.pdf

Dear Mr. CHAN,

We are the environmental consultant for the **for S.12A application, Proposed Minor Relaxation of Building Height (BH) Restriction for Permitted Social Welfare Facility (Residential Care Home for the Elderly) Use in “Government, Institution or Community” (“G/IC”) zone, Lot 496 S.C in D.D. 132 and Adjoining Government Land (GL), Tuen Mun, New Territories.**

Recently, we have received EPD comments for Sewerage Impact Assessment (SIA) and Environmental Assessment (EA). It would be grateful if you can provide the following information about Tuen Mun Water Treatment Works for our assessment.

1. Any air pollutant or odour emission sources from Tuen Mun Water Treatment Works which may cause adverse air quality or odour impacts?
2. The nos. of staff at Tuen Mun Water Treatment Works.
3. The location of sewage discharge to the public sewerage system.
4. The average daily flow and peak daily flow of sewage discharge (m3/day).

The comments from EPD (yellow-highlighted) are attached for your information.

Should you have any questions, please feel free to contact me.

Regards,
Cheryl
Urban Green Consultants Ltd.
3565 3317

Appendix B3

Extract of EPD's Comment on Planning Application
A/TM/419

部門意見 Departmental Comments

環保署署長DEP

- 不反對申請
No objection to the application
- 留意到場內不提供燃燒爐，嚴禁燃燒活動，祭祠活動全在室內舉行，及場內污水會排放到公眾污水渠
Note no burning facility provided, no burning activities allowed, all ceremonies held indoor, and on-site sewerage will connect public sewerage. Environmental issues with respect to air quality and noise pollution addressed
- 有關潛在危險施設評估的關注已解決
Concerns on PHI assessment, addressed

機電工程署署長DEMS

- 沒有負面意見。應嚴格遵守風險評估的建議
EMSD no adverse comments. All recommendations of Risk Assessment should be strictly followed

部門意見 Departmental Comments

食物及環境衛生局局長S for FH

- 申請人需要解決部門及公眾對環境與交通問題上的關注
The applicant should address the traffic concerns, environmental concerns and local concerns raised by departments and public

屯門民政事務專員DO(TM)

- 屯門區議員、多個關注團體及公眾反對申請，城規會應考慮公眾反應
Note that Tuen Mun District Council members and various concerns group and public raise objection. The Board should take public reaction into account

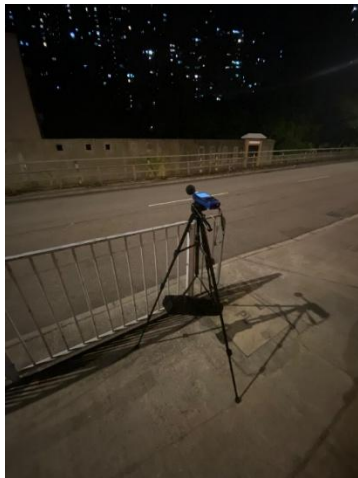
Appendix C1

Details of Background Noise Survey

Measurement Results of Background Noise Measurement

Equipment Used (Model and Serial No.)	Noise Meter: XL2-A2A-22051-F0 Calibrator: CEL-120/1 4884880
Weather Condition	Sunny
Noise Descriptors	LAeq 30 minutes
Measurement Method	Direct measurement
Microphone Position	Free-field measurement

Monitoring Location	Representative NSR	Daytime	Evening time	Night time
P1	NSR 3 Gig Lok Monastery & NSR 5 Ching Leung Nunnery			
Measurement Date and Time		11/12/2025 11:49 - 12:19	11/12/2025 21:11-21:41	12/12/2025 23:00-23:30
Measured LAeq 30 minutes, dB(A) ⁽¹⁾		62.2	59.5	54.2

Monitoring Location	Representative NSR	Daytime	Evening time	Night time
P2	Tuen Fu Road Disciplined Services Quarters & NSR 2 Tuen Mun Treatment Works Staff Quarters			
Measurement Date and Time		11/12/2025 11:18 - 11:48	11/12/2025 20:40-21:10	12/12/2025 - 13/12/2025 23:33-00:03
Measured LAeq 30 minutes, dB(A) ⁽¹⁾		67.3	63.7	56.7

Monitoring Location	Representative NSR	Daytime	Evening time	Night time
P3	NSR 6 – NSR 8 Village Houses 1-3			
Measurement Date and Time		11/12/2025 10:14 - 10:44	11/12/2025 19:34-20:04	13/12/2025 00:05-00:35
Measured LAeq 30 minutes, dB(A) ⁽¹⁾		61.0	63.2	56.1

Monitoring Location	Representative NSR	Daytime	Evening time	Night time
P4	NSR 4 Parkland Villas			
Measurement Date and Time		11/12/2025 09:41 - 10:11	11/12/2025 19:00-19:30	13/12/2025 00:36-01:06
Measured LAeq 30 minutes, dB(A) ⁽¹⁾		63.8	61.2	54.8

Note: (1) +3dB(A) for façade correction has been applied.

Appendix C2

Traffic Forecast in 2047 and TD's Comment for the
Traffic Forecast

**S12A Planning Application for Proposed Residential Care Home for Elderly (RCHE)
 at Lot 496 S.C in D.D. 132 and Adjoining Government Land, Tuen Mun, N.T**

TRAFFIC FORECAST FOR TRAFFIC NOISE IMPACT ASSESSMENT

Link No.	Road Name	Speed (km/hr)	Direction	Year 2047			
				AM Peak		PM Peak	
				Traffic Flow (veh/hr)	HV%	Traffic Flow (veh/hr)	HV%
1	Castle Peak Road - Lingnan	50	NB	280	42%	350	32%
2	Castle Peak Road - Lingnan	50	SB	890	29%	620	26%
3	Castle Peak Road - Lingnan	50	SB	930	33%	650	27%
4	Fu Tei Road	50	Two-way	100	24%	110	23%
5	Access Road	50	Two-way	10	19%	10	15%
6	Fu Tei Road	50	Two-way	80	25%	110	25%
7	Access Road	50	Two-way	30	25%	40	26%
8	Fu Tei Road	50	Two-way	70	24%	60	26%
9	Tuen Fu Road	50	Two-way	160	28%	100	15%
10	Tuen On Lane	50	Two-way	120	26%	110	17%
11	Tuen Fu Road	50	Two-way	190	28%	130	9%
12	Access Road	50	Two-way	10	10%	10	10%
13	Tuen Fu Road	50	Two-way	210	28%	150	9%
14	Access Road	50	Two-way	10	10%	10	10%
15	Tuen Fu Road	50	Two-way	250	24%	180	7%
16	Tuen Fu Road	50	Two-way	300	19%	180	6%
17	Hing Ping Road	50	Two-way	20	32%	20	8%
18	Castle Peak Road - Lingnan	50	EB	350	43%	410	32%
19	Tuen Lok Lane	50	Two-way	30	13%	10	16%
20	Tuen Lok Lane	50	Two-way	20	15%	10	21%
21	Access Road	50	Two-way	20	10%	10	11%
22	Castle Peak Road - Lingnan	50	EB	320	39%	420	31%
23	Castle Peak Road - Lingnan	50	WB	1050	31%	670	27%
24	Castle Peak Road - San Hui	50	NB	290	37%	400	30%
25	Castle Peak Road - San Hui	50	SB	1010	25%	630	22%
26	Access Road	50	Two-way	70	25%	60	29%
27	Castle Peak Road - San Hui	50	NB	290	37%	400	30%
28	Castle Peak Road - San Hui	50	SB	1010	25%	640	23%
29	Access Road	50	Two-way	370	76%	260	66%
30	Siu Hong Station South PTI	50	NB	10	100%	20	100%
31	Siu Hong Station South PTI	50	NB	170	84%	150	74%
32	Siu Hong Station South PTI	50	SB	100	100%	40	100%
33	Siu Hong Station South PTI	50	SB	50	100%	20	100%
34	Siu Hong Station South PTI	50	SB	60	100%	30	100%
35	Siu Hong Station South PTI	50	SB	90	64%	90	49%
36	Siu Hong Station South PTI	50	SB	190	88%	130	83%
37	Tuen Mun Road	70	NB	4880	40%	5390	33%
38	Tuen Mun Road	70	SB	5710	46%	5250	35%

Notes :
 (1) Please refer to the Location Plan (i.e. Figure A) attached in Appendix A.
 (2) HV includes Light Van, Public Light Bus, Light Goods Vehicle, Medium Goods Vehicle,
 Heavy Goods Vehicle and Container/Tractor, Coach and Bus. Bus includes Coach and Bus

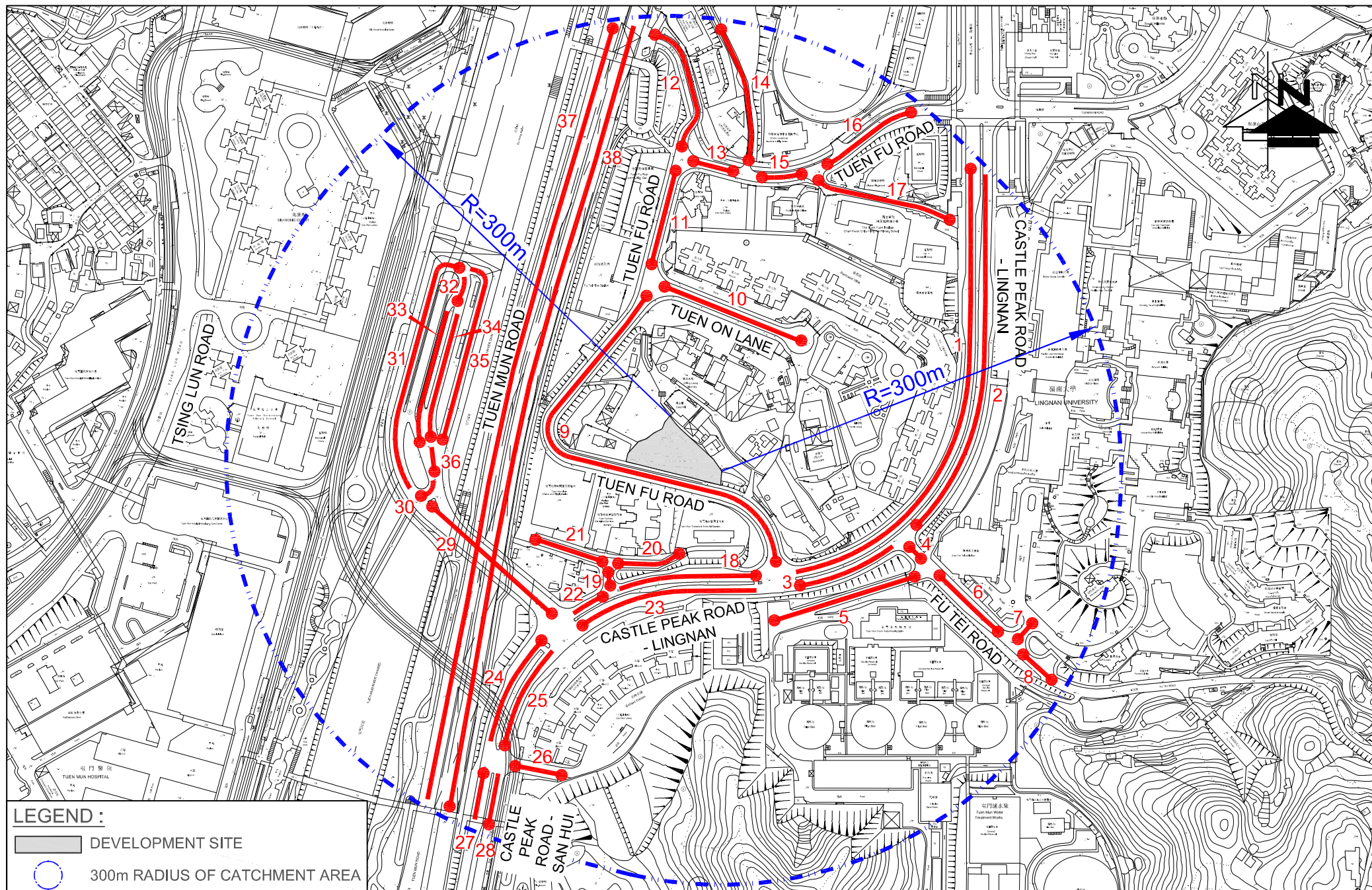


FIGURE NO.: A	PROJECT TITLE: S12A Planning Application for Proposed Residential Care Home for Elderly (RCHE) at Lot 496 S.C in D.D. 132 and Adjoining Government Land, Tuen Mun, N.T.	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 25075HK	DRAWING TITLE: INDEX PLAN FOR TNIA (300m)	
SCALE: 1: 3750 @A4	DATE: 11 DEC 2025	

By Fax
2214 0817



本署檔案 Our Ref. : (00TVP) in 010-070-452-NR-TMDD-132
來函檔號 Your Ref. : 25075HK/hor/ykl/01
電話 Tel. : 2399 2225
圖文傳真 Fax : 2381 3799
電郵 Email : tikwaiwong@td.gov.hk

31 March 2026

CTA Consultants Limited
Unit 2108, 21/F, Westlands Centre,
20 Westlands Road, Quarry Bay
Hong Kong
(Attention: Mr. Horace Mak)

Dear Sir/Madam,

**Section 12A Application for Proposed Rezoning from
“Government, Institution or Community” to
“Government, Institution or Community (6)”
at Tuen Mun, New Territories and to Amend the Noted of the Zone Applicable to the
Site for the Proposed Social Welfare Facility (Residential Care Home for the Elderly) at
Section C of Lot No. 496 in D.D 132 and the
adjoining Government Land, Tuen Mun, New Territories**

Year 2047 Traffic Forecasts for Traffic Noise Impact Assessment (TNIA)

I refer to the above referenced letter regarding captioned.

Please note that Noise Impact Assessment is not under our purview. We are not in a position to provide comments on the traffic figures tailor-made for the environmental assessment study. Notwithstanding the above, we have no objection in principle to the methodology of traffic forecast provided that the methodology is consistent with the TIA Report submitted in the project.

Yours faithfully,

(Dicky WONG)
for Commissioner for Transport

新界分區辦事處
NT Regional Office
九龍聯運街三十號旺角政府合署七樓
7th Floor, Mong Kok Government Offices, 30 Lucan Wan Street, Kowloon.
圖文傳真 Fax No.: 2381 3799 (新界區) (NTRO)
網址 Web Site: <http://www.td.gov.hk>

Appendix C3

The Predicted Maximum Traffic Noise Levels

Road Traffic Noise Impact Assessment
Base Scenario - Predicted Traffic Noise Levels

2/F

Floor	mPD	O01	O02	O03	O04	O05	O06	O07	O08	O09	O10	O11	O12	O13	O14	O15	O16	O17	O18	O19	O20	O21	O22	O23
2F	12.57	56.9	60.4	60.8	60.8	60.7	60.7	71.2	71.4	71.3	71.3	71.3	71.3	71.2	71.3	71.3	71.4	71.4	71.5	71.3	71.4	71.2	71.3	71.4
Max Noise Level		56.9	60.4	60.8	60.8	60.7	60.7	71.2	71.4	71.3	71.3	71.3	71.3	71.2	71.3	71.3	71.4	71.4	71.5	71.3	71.4	71.2	71.3	71.4
Exceedance (by NAP)		0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Exceedance (by unit)		0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

3/F - 7/F

Floor	mPD	O01	O02	O03	O04	O05	O06	O07	O08	O09	O10	O11	O12	O13	O14	O15	O16	O17	O18	O19	O20	O21	O22	O23	O24
3F	15.72	57.5	61.3	61.6	61.6	61.6	61.5	61.4	70.7	70.8	70.8	70.8	70.8	70.7	70.7	70.7	70.8	70.9	71	71.1	70.9	71	71	71.2	71.4
4F	18.87	58.3	62.2	62.4	62.4	62.3	62.2	62.1	70.3	70.4	70.3	70.3	70.3	70.2	70.2	70.3	70.3	70.6	70.8	70.8	70.8	70.8	70.8	71	71.2
5F	22.02	58.9	62.9	63.1	63.1	63	62.9	62.8	70	70.1	70	70	69.9	69.9	69.8	69.9	69.9	70.3	70.5	70.5	70.5	70.5	70.6	70.7	71
6F	25.17	59.5	63.4	63.7	63.7	63.6	63.5	63.4	69.9	69.9	69.8	69.8	69.7	69.6	69.6	69.6	69.6	70	70.3	70.3	70.3	70.3	70.3	70.5	70.7
7F	28.32	60	63.8	64.1	64.1	64	64	63.9	69.9	69.8	69.7	69.6	69.6	69.4	69.4	69.4	69.4	69.9	70.1	70.1	70.1	70.2	70.1	70.3	70.6
Max Noise Level		60	63.8	64.1	64.1	64	64	63.9	70.7	70.8	70.8	70.8	70.8	70.7	70.7	70.7	70.8	70.9	71	71.1	70.9	71	71	71.2	71.4
Exceedance (by NAP)		0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	4	5
Exceedance (by unit)		0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	4	5

9/F - 13/F

Floor	mPD	O01	O02	O03	O04	O05	O06	O07	O08	O09	O10	O11	O12	O13	O14	O15	O16	O17	O18	O19	O20	O21	O22	O23	O24
9F	36.47	60.8	64.4	64.6	64.7	64.6	64.6	64.6	69.5	69.4	69.3	69.3	69.1	69	68.9	68.9	69	69.5	69.7	69.8	69.7	69.8	69.8	70	70.4
10F	39.62	60.9	64.6	64.8	64.8	64.8	64.8	64.7	69.3	69.3	69.2	69.1	68.9	68.8	68.8	68.8	68.8	69.3	69.6	69.7	69.6	69.7	69.7	70	70.3
11F	42.77	61.1	64.7	64.9	64.9	64.9	64.9	64.8	69.1	69.1	69	68.9	68.8	68.7	68.6	68.6	68.7	69.2	69.5	69.5	69.5	69.6	69.7	69.9	70.3
12F	45.92	61.2	64.8	64.9	65	64.9	64.9	64.9	68.9	68.9	68.8	68.8	68.6	68.5	68.5	68.5	68.6	69.1	69.4	69.5	69.5	69.6	69.7	69.9	70.3
13F	49.07	61.5	64.9	65	65.1	65	65	65	68.8	68.8	68.7	68.6	68.5	68.4	68.3	68.3	68.5	69.1	69.4	69.4	69.4	69.6	69.6	69.9	70.2
Max Noise Level		61.5	64.9	65	65.1	65	65	65	69.5	69.4	69.3	69.3	69.1	69	68.9	68.9	69	69.5	69.7	69.8	69.7	69.8	69.8	70	70.4
Exceedance (by NAP)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exceedance (by unit)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	RCHE (Domestic)
Total no. of Unit	263
Total no. of Exceedance	52
Compliance Rate	80.2%
Max. Noise Level	71.5

Appendix C4

The Summary of Maximum Traffic Noise Levels
After Adopting the Proposed Mitigation Measures

G/F - 2/F

Floor	mPD	O01	O02	O03	O04	O05	O06	O07	O08	O09	O10	O11	O12	O13	O14	O15	O16	O17	O18	O19	O20	O21	O22	O23
2F	12.57	56.9	60.4	60.8	60.8	60.7	60.7	64.8	65	64.9	64.9	64.9	64.9	64.8	64.9	64.9	65	65	65.1	64.9	65	64.8	64.9	65
Max Noise Level		56.9	60.4	60.8	60.8	60.7	60.7	64.8	65	64.9	64.9	64.9	64.9	64.8	64.9	64.9	65	65	65.1	64.9	65	64.8	64.9	65
Exceedance (by NAP)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exceedance (by unit)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3/F - 7/F

Floor	mPD	O01	O02	O03	O04	O05	O06	O07	O08	O09	O10	O11	O12	O13	O14	O15	O16	O17	O18	O19	O20	O21	O22	O23	O24
3F	15.72	57.5	61.3	61.6	61.6	61.6	61.5	61.4	64.3	64.4	64.4	64.4	64.4	64.3	64.3	64.3	64.4	64.5	64.6	64.7	64.5	64.6	64.6	64.8	65
4F	18.87	58.3	62.2	62.4	62.4	62.3	62.2	62.1	70.3	70.4	70.3	70.3	70.3	70.2	70.2	70.3	70.3	64.2	64.4	64.4	64.4	64.4	64.4	64.6	64.8
5F	22.02	58.9	62.9	63.1	63.1	63	62.9	62.8	70	70.1	70	70	69.9	69.9	69.8	69.9	69.9	70.3	64.1	64.1	64.1	64.1	64.2	64.3	64.6
6F	25.17	59.5	63.4	63.7	63.7	63.6	63.5	63.4	69.9	69.9	69.8	69.8	69.7	69.6	69.6	69.6	69.6	70	70.3	70.3	70.3	70.3	70.3	64.1	64.3
7F	28.32	60	63.8	64.1	64.1	64	64	63.9	69.9	69.8	69.7	69.6	69.6	69.4	69.4	69.4	69.4	69.9	70.1	70.1	70.1	70.2	70.1	70.3	64.2
Max Noise Level		60	63.8	64.1	64.1	64	64	63.9	70.3	70.4	70.3	70.3	70.3	70.2	70.2	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	65
Exceedance (by NAP)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exceedance (by unit)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

9/F - 13/F

Floor	mPD	O01	O02	O03	O04	O05	O06	O07	O08	O09	O10	O11	O12	O13	O14	O15	O16	O17	O18	O19	O20	O21	O22	O23	O24
9F	36.47	60.8	64.4	64.6	64.7	64.6	64.6	64.6	69.5	69.4	69.3	69.3	69.1	69	68.9	68.9	69	69.5	69.7	69.8	69.7	69.8	69.8	70	70.4
10F	39.62	60.9	64.6	64.8	64.8	64.8	64.8	64.7	69.3	69.3	69.2	69.1	68.9	68.8	68.8	68.8	68.8	69.3	69.6	69.7	69.6	69.7	69.7	70	70.3
11F	42.77	61.1	64.7	64.9	64.9	64.9	64.9	64.8	69.1	69.1	69	68.9	68.8	68.7	68.6	68.6	68.7	69.2	69.5	69.5	69.5	69.6	69.7	69.9	70.3
12F	45.92	61.2	64.8	64.9	65	64.9	64.9	64.9	68.9	68.9	68.8	68.8	68.6	68.5	68.5	68.5	68.6	69.1	69.4	69.5	69.5	69.6	69.7	69.9	70.3
13F	49.07	61.5	64.9	65	65.1	65	65	65	68.8	68.8	68.7	68.6	68.5	68.4	68.3	68.3	68.5	69.1	69.4	69.4	69.4	69.6	69.6	69.9	70.2
Max Noise Level		61.5	64.9	65	65.1	65	65	65	69.5	69.4	69.3	69.3	69.1	69	68.9	68.9	69	69.5	69.7	69.8	69.7	69.8	69.8	70	70.4
Exceedance (by NAP)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exceedance (by unit)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	RCHE (Domestic)
Total no. of Unit	263
Total no. of Exceedance	0
Compliance Rate	100%
Max. Noise Level	70.4

Appendix C5

Schedule of Noise Mitigation Measures

Proposed Road Traffic Noise Mitigation Measures Schedule

G/F - 2/F - 2/F

Opening	Room	Floor	Noise Mitigation Measures
O07	DORM	2F	Acoustic Window (Baffle Type)
O08	DORM	2F	Acoustic Window (Baffle Type)
O09	DORM	2F	Acoustic Window (Baffle Type)
O10	DORM	2F	Acoustic Window (Baffle Type)
O11	DORM	2F	Acoustic Window (Baffle Type)
O12	DORM	2F	Acoustic Window (Baffle Type)
O13	DORM	2F	Acoustic Window (Baffle Type)
O14	DORM	2F	Acoustic Window (Baffle Type)
O15	DORM	2F	Acoustic Window (Baffle Type)
O16	DORM	2F	Acoustic Window (Baffle Type)
O17	DORM	2F	Acoustic Window (Baffle Type)
O18	DORM	2F	Acoustic Window (Baffle Type)
O19	DORM	2F	Acoustic Window (Baffle Type)
O20	DORM	2F	Acoustic Window (Baffle Type)
O21	DORM	2F	Acoustic Window (Baffle Type)
O22	DORM	2F	Acoustic Window (Baffle Type)
O23	DORM	2F	Acoustic Window (Baffle Type)

3/F - 7/F - 3/F to 7/F

Opening	Room	Floor	Noise Mitigation Measures
O08	DORM	3F	Acoustic Window (Baffle Type)
O09	DORM	3F	Acoustic Window (Baffle Type)

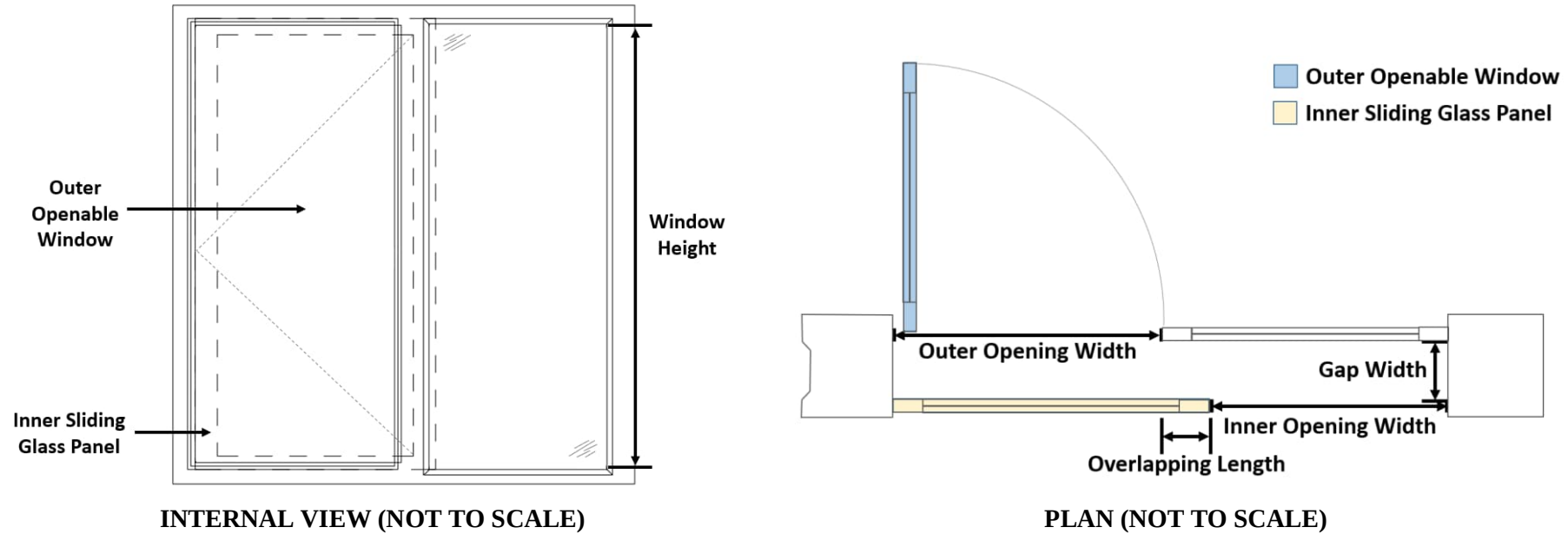
Proposed Road Traffic Noise Mitigation Measures Schedule

O10	DORM	3F	Acoustic Window (Baffle Type)
O11	DORM	3F	Acoustic Window (Baffle Type)
O12	DORM	3F	Acoustic Window (Baffle Type)
O13	DORM	3F	Acoustic Window (Baffle Type)
O14	DORM	3F	Acoustic Window (Baffle Type)
O15	DORM	3F	Acoustic Window (Baffle Type)
O16	DORM	3F	Acoustic Window (Baffle Type)
O17	DORM	3F - 4F	Acoustic Window (Baffle Type)
O18	DORM	3F - 5F	Acoustic Window (Baffle Type)
O19	DORM	3F - 5F	Acoustic Window (Baffle Type)
O20	DORM	3F - 5F	Acoustic Window (Baffle Type)
O21	DORM	3F - 5F	Acoustic Window (Baffle Type)
O22	DORM	3F - 5F	Acoustic Window (Baffle Type)
O23	DORM	3F - 6F	Acoustic Window (Baffle Type)
O24	DORM	3F - 7F	Acoustic Window (Baffle Type)

Appendix C6

Configuration of Acoustic Windows with Room Adjustment

(I) Possible design of “Acoustic Window (Baffle Type)” for 8m² and 18m² habitable rooms (i.e. dining room, living room or bedroom)



Possible Designs of “Acoustic Window (Baffle Type)” for 8m ² and 18m ² rooms					
Room Size (m ²)	Room Dimensions (mm ³)	Inner Window Opening (mm ²)	Outer Window Opening (mm ²)	Overlapping Length (mm)	Gap Width (mm)
8	3200 (W) x 2500 (D) x 3400 (H)	580 (W) x 870 (H)	600 (W) x 870 (H)	≥ 100	100 to 175
18	5300 (W) x 3390 (D) x 3400 (H)	750 (W) x 1500 (H)	750 (W) x 1500 (H)	≥ 100	100 to 175

Notes:

a. These are feasible designs of AW(BT) for 8m² and 18m² rooms.

b. For optimum performance of noise reduction, the air gap should have a pane-to-pane overlapping length of ≥ 100mm and a gap width between 100mm and 175mm, with the inner sliding glass panel in a closed position. The window pane shall be ≥ 6mm in thickness.

Preferred NAP/NSR Name (B-U-O-F-R)	Receiver-end Measures	Reference Case	Proposed Development						Reference Case							Room Size Adjustment (adjust downward only), dB(A)	Adjusted Sound Attenuation, dB(A)	Relative Noise Reduction, dB(A)	Minimum Noise Reduction Required, dB(A)	Mitigated Noise Level, dB(A)
			Outer Opening Width, mm	Outer Opening Height, mm	Outer Opening Area, m ²	Gap Width, mm	Overlapping Length, mm	Room Area (RA), m ²	Outer Opening Width, mm	Outer Opening Height, mm	Outer Opening Area, m ²	Gap Width, mm	Overlapping Length, mm	Room Area (RAref), m ²	Ref. Sound Attenuation, dB(A)					
T1-G-O07-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.8	64.8
T1-H-O08-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	1	65
T1-I-O09-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.9	64.9
T1-J-O10-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.9	64.9
T1-K-O11-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.9	64.9
T1-L-O12-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.9	64.9
T1-M-O13-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.8	64.8
T1-N-O14-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.9	64.9
T1-O-O15-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.9	64.9
T1-P-O16-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	1	65
T1-Q-O17-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	1	65
T1-R-O18-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	1.1	65.1
T1-S-O19-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.9	64.9
T1-T-O20-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	1	65
T1-U-O21-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.8	64.8
T1-V-O22-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.9	64.9
T1-W-O23-2F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	1	65
T1-H-O08-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.3	64.3
T1-I-O09-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.4	64.4
T1-J-O10-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.4	64.4
T1-K-O11-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.4	64.4
T1-L-O12-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.4	64.4
T1-M-O13-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.3	64.3
T1-N-O14-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.3	64.3
T1-O-O15-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.3	64.3
T1-P-O16-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.4	64.4
T1-Q-O17-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.5	64.5
T1-Q-O17-4F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.2	64.2
T1-R-O18-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.6	64.6
T1-R-O18-4F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.4	64.4
T1-R-O18-5F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.1	64.1
T1-S-O19-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.7	64.7
T1-S-O19-4F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.4	64.4
T1-S-O19-5F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.1	64.1
T1-T-O20-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.5	64.5
T1-T-O20-4F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.4	64.4
T1-T-O20-5F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.1	64.1
T1-U-O21-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.6	64.6
T1-U-O21-4F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.4	64.4
T1-U-O21-5F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.1	64.1
T1-V-O22-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.6	64.6
T1-V-O22-4F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.4	64.4
T1-V-O22-5F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.2	64.2
T1-W-O23-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.8	64.8
T1-W-O23-4F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.6	64.6
T1-W-O23-5F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.3	64.3
T1-W-O23-6F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.1	64.1
T1-X-O24-3F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	1	65
T1-X-O24-4F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.8	64.8
T1-X-O24-5F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.6	64.6
T1-X-O24-6F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.3	64.3
T1-X-O24-7F-DORM	Acoustic Window (Baffle Type)(2-PN)	AW(BT)2-PN	750	1500	1.13	100	100	15.8	750	1500	1.13	100	100	18	7	-0.6	6.4	6.4	0.2	64.2

Appendix C7

Details of Rail Noise Survey

Details of Railway Noise Measurement

Measurement Date:	11 December 2025
Measurement Time:	07:00-09:00
Measurement Location:	Walkway at Siu Hong Station (South) Public Transport Interchange (Please refer to Figure 4.8)
Weather Condition:	Sunny 19 °C
Equipment Used:	Noise Meter: XL2 A2A-22051-F0 Calibrator : CEL-120/1 4884880
Microphone position:	About 25m from near track
Measurement Condition:	Free field
Measurement Parameter:	LAeq
Track Type:	Ballast track with concrete sleepers
Rail Condition:	In normal service
Field Observation:	Audible turnout impact noise and noise were clearly captured for all train passing at light railway at viaduct and at-grade section.
Photo Record:	



Table 1.1 Measurement Result of On-site Railway Noise Measurement on 11 December 2025

Events #	Scenario	Start Time	End Time	Time Elapsed (Second)	Leq Average	Leq Minimum	Leq Maximum
1	Background	7:02:01	7:04:59	179	65.2	57.6	74.5
2	Other	7:05:00	7:05:19	20	63.6	60.2	66.8
3	Background	7:05:20	7:05:46	27	64.2	60.2	68.1
4	Other	7:05:47	7:06:29	43	63.7	59.9	69.5
5	Background	7:06:30	7:06:39	10	67.2	61.3	71.5
6	Other	7:06:40	7:06:47	8	60.9	59.8	62.5
7	Background	7:06:48	7:08:21	94	61.9	58.8	67.5
8	Other	7:08:22	7:08:46	25	61.2	59.8	64.3
9	Background	7:08:47	7:09:14	28	63.2	59.4	67.8
10	Other	7:09:15	7:09:48	34	61.6	59.1	66.9
11	Background	7:09:49	7:09:51	3	60.2	59.9	60.6
12	Other	7:09:52	7:10:00	9	58.9	58.3	60.3
13	Background	7:10:01	7:10:02	2	58.5	58.3	58.6
14	Other	7:10:03	7:10:10	8	59.0	58.8	59.4
15	Background	7:10:11	7:10:54	44	61.3	59.3	63.7
16	Other	7:10:55	7:11:06	12	66.9	60.3	69.3
17	Background	7:11:07	7:11:14	8	67.2	65.1	70.1
18	Far Track	7:11:15	7:11:37	23	61.7	59.0	67.0
19	Background	7:11:38	7:11:47	10	63.7	60.1	69.4
20	Other	7:11:48	7:12:15	28	65.8	59.0	71.0
21	Background	7:12:16	7:13:02	47	59.6	58.0	63.0
22	Other	7:13:03	7:13:13	11	64.7	63.1	66.9
23	Near Track	7:13:14	7:13:37	24	64.5	60.7	68.4
24	Other	7:13:38	7:13:48	11	66.2	63.7	69.9
25	Background	7:13:49	7:13:50	2	67.7	67.7	67.7
26	Other	7:13:51	7:13:55	5	67.7	66.6	68.4
27	Background	7:13:56	7:13:59	4	68.4	68.0	68.8
28	Other	7:14:00	7:14:14	15	65.5	62.6	68.1
29	Background	7:14:15	7:14:21	7	62.7	61.7	64.1
30	Other	7:14:22	7:14:36	15	64.4	61.1	68.1
31	Background	7:14:37	7:14:59	23	62.2	60.8	67.5
32	Other	7:15:00	7:15:16	17	64.2	60.8	67.2
33	Background	7:15:17	7:15:24	8	62.4	60.2	65.8
34	Other	7:15:25	7:16:17	53	63.8	60.5	68.6
35	Background	7:16:18	7:17:40	83	61.3	58.6	68.2
36	Other	7:17:41	7:18:03	23	65.0	58.8	72.9
37	Background	7:18:04	7:19:24	81	59.4	57.9	61.8
38	Far Track	7:19:25	7:19:34	10	62.5	59.4	65.9
39	Other	7:19:35	7:20:00	26	67.2	59.3	69.9
40	Background	7:20:01	7:21:40	100	59.0	57.2	63.3
41	Near Track	7:21:41	7:22:00	20	62.0	60.7	63.2
42	Background	7:22:01	7:22:20	20	66.5	61.6	70.2
43	Other	7:22:21	7:22:35	15	61.3	59.9	62.9
44	Background	7:22:36	7:22:41	6	63.8	63.0	64.5
45	Other	7:22:42	7:22:55	14	65.6	59.8	69.2
46	Background	7:22:56	7:23:43	48	61.6	57.8	65.8
47	Other	7:23:44	7:24:10	27	63.3	58.1	66.4
48	Background	7:24:11	7:24:30	20	63.2	60.5	66.3
49	Near Track	7:24:31	7:24:41	11	64.3	61.4	68.3
50	Background	7:24:42	7:25:00	19	65.2	62.1	68.8
51	Other	7:25:01	7:25:19	19	60.3	59.7	61.5
52	Background	7:25:20	7:25:54	35	62.2	58.8	65.1
53	Far Track	7:25:55	7:25:55	1	61.3	61.3	61.3
54	Other	7:25:56	7:26:17	22	65.2	61.4	68.8
55	Background	7:26:18	7:26:59	42	62.5	58.2	68.3
56	Near Track	7:27:00	7:27:23	24	60.9	58.7	63.3
57	Background	7:27:24	7:27:39	16	59.0	58.4	60.5
58	Other	7:27:40	7:28:17	38	64.4	59.5	70.9
59	Background	7:28:18	7:28:23	6	61.0	59.4	62.7

Table 1.1 Measurement Result of On-site Railway Noise Measurement on 11 December 2025

Events #	Scenario	Start Time	End Time	Time Elapsed (Second)	Leq Average	Leq Minimum	Leq Maximum
60	Other	7:28:24	7:28:35	12	63.7	61.9	65.4
61	Background	7:28:36	7:29:34	59	61.6	57.7	65.6
62	Other	7:29:35	7:29:45	11	62.5	59.5	65.8
63	Background	7:29:46	7:29:54	9	59.7	58.7	60.7
64	Other	7:29:55	7:30:00	6	58.7	58.6	58.8
65	Background	7:30:01	7:30:05	5	59.0	58.7	59.7
66	Other	7:30:06	7:30:23	18	62.5	60.2	64.6
67	Background	7:30:24	7:30:33	10	59.6	59.1	60.6
68	Other	7:30:34	7:30:42	9	59.7	59.2	60.5
69	Background	7:30:43	7:31:10	28	61.3	58.5	67.2
70	Near Track	7:31:11	7:31:40	30	65.4	60.0	68.6
71	Other	7:31:41	7:32:20	40	62.2	59.9	65.2
72	Background	7:32:21	7:32:41	21	62.6	59.5	68.2
73	Other	7:32:42	7:33:00	19	64.4	59.6	70.0
74	Background	7:33:01	7:33:31	31	59.6	58.1	61.8
75	Other	7:33:32	7:33:51	20	68.4	60.4	74.8
76	Background	7:33:52	7:34:19	28	61.0	58.4	65.3
77	Other	7:34:20	7:34:26	7	59.5	59.0	60.3
78	Background	7:34:27	7:34:49	23	61.3	59.3	64.3
79	Near Track	7:34:50	7:35:03	14	62.2	60.1	64.6
80	Background	7:35:04	7:35:12	9	64.0	62.4	65.5
81	Other	7:35:13	7:35:29	17	67.5	60.6	72.9
82	Background	7:35:30	7:35:33	4	60.6	60.3	60.9
83	Other	7:35:34	7:35:45	12	60.3	57.6	63.4
84	Background	7:35:46	7:36:06	21	58.5	57.6	59.9
85	Other	7:36:07	7:36:43	37	62.8	59.2	67.4
86	Background	7:36:44	7:36:59	16	64.3	60.1	68.0
87	Other	7:37:00	7:37:16	17	65.8	59.4	71.6
88	Near Track	7:37:17	7:37:36	20	58.7	58.0	60.6
89	Background	7:37:37	7:37:38	2	61.1	61.1	61.1
90	Far Track	7:37:39	7:37:42	4	63.9	62.7	65.3
91	Other	7:37:43	7:38:01	19	65.9	60.7	72.1
92	Background	7:38:02	7:38:49	48	60.2	58.1	63.2
93	Other	7:38:50	7:39:04	15	63.7	60.2	67.5
94	Background	7:39:05	7:39:36	32	59.3	57.8	63.1
95	Other	7:39:37	7:41:16	100	63.5	59.3	68.2
96	Background	7:41:17	7:41:35	19	62.4	59.3	65.0
97	Other	7:41:36	7:42:26	51	65.0	59.4	69.3
98	Background	7:42:27	7:43:24	58	59.8	58.8	62.2
99	Other	7:43:25	7:45:30	126	63.6	58.5	70.5
100	Background	7:45:31	7:45:36	6	61.7	60.6	63.2
101	Other	7:45:37	7:46:09	33	63.0	58.4	68.1
102	Background	7:46:10	7:46:39	30	63.8	60.1	67.8
103	Other	7:46:40	7:47:17	38	67.5	61.2	73.3
104	Background	7:47:18	7:47:32	15	62.6	61.1	64.7
105	Other	7:47:33	7:47:46	14	64.3	59.1	68.8
106	Background	7:47:47	7:48:02	16	60.7	59.0	63.3
107	Other	7:48:03	7:48:10	8	59.8	59.5	60.3
108	Background	7:48:11	7:48:20	10	62.2	59.0	65.9
109	Other	7:48:21	7:49:02	42	64.7	59.3	71.1
110	Background	7:49:03	7:49:42	40	59.5	58.3	62.4
111	Other	7:49:43	7:50:07	25	65.0	59.9	70.1
112	Background	7:50:08	7:50:36	29	60.0	58.4	63.7
113	Other	7:50:37	7:50:47	11	64.3	60.4	67.4
114	Background	7:50:48	7:50:58	11	65.7	63.0	67.5
115	Other	7:50:59	7:51:08	10	64.1	62.0	66.4
116	Background	7:51:09	7:51:33	25	59.7	58.4	62.1
117	Other	7:51:34	7:52:00	27	67.1	58.9	74.3
118	Background	7:52:01	7:52:08	8	64.4	61.8	66.2

Table 1.1 Measurement Result of On-site Railway Noise Measurement on 11 December 2025

Events #	Scenario	Start Time	End Time	Time Elapsed (Second)	Leq Average	Leq Minimum	Leq Maximum
119	Other	7:52:09	7:52:13	5	60.1	59.4	61.2
120	Background	7:52:14	7:52:21	8	62.7	59.8	66.5
121	Far Track	7:52:22	7:52:39	18	65.3	57.8	71.2
122	Background	7:52:40	7:53:00	21	61.1	57.7	65.6
123	Other	7:53:01	7:53:07	7	60.8	58.6	63.4
124	Background	7:53:08	7:53:32	25	62.0	58.8	65.1
125	Other	7:53:33	7:53:47	15	63.7	57.4	67.3
126	Background	7:53:48	7:54:41	54	60.1	57.6	64.8
127	Other	7:54:42	7:54:55	14	60.3	57.9	63.2
128	Background	7:54:56	7:55:40	45	59.9	58.1	65.1
129	Other	7:55:41	7:55:50	10	68.3	65.7	70.6
130	Far Track	7:55:51	7:55:57	7	63.2	60.4	65.1
131	Background	7:55:58	7:56:29	32	62.3	58.6	65.3
132	Near Track	7:56:30	7:56:35	6	62.9	61.8	63.4
133	Other	7:56:36	7:56:47	12	63.5	58.3	66.9
134	Background	7:56:48	7:57:39	52	58.7	57.3	61.7
135	Other	7:57:40	7:58:00	21	65.3	60.2	68.5
136	Background	7:58:01	7:58:25	25	64.9	59.2	68.8
137	Other	7:58:26	7:58:41	16	66.2	62.6	67.5
138	Background	7:58:42	7:58:52	11	60.3	59.3	61.8
139	Other	7:58:53	7:59:05	13	65.5	58.1	70.1
140	Background	7:59:06	7:59:32	27	58.7	58.1	59.9
141	Other	7:59:33	7:59:58	26	67.6	60.4	75.3
142	Background	7:59:59	8:00:36	38	61.0	59.2	63.8
143	Other	8:00:37	8:00:45	9	59.6	59.0	61.0
144	Background	8:00:46	8:01:03	18	59.3	58.2	61.2
145	Other	8:01:04	8:01:26	23	63.1	59.5	65.0
146	Near Track	8:01:27	8:01:36	10	63.1	61.4	64.6
147	Background	8:01:37	8:01:46	10	65.0	63.6	66.8
148	Other	8:01:47	8:02:01	15	69.7	60.6	74.0
149	Background	8:02:02	8:02:42	41	59.8	58.3	62.5
150	Other	8:02:43	8:03:10	28	66.2	59.9	72.4
151	Background	8:03:11	8:03:32	22	62.2	59.6	69.3
152	Other	8:03:33	8:04:06	34	65.3	59.2	71.5
153	Background	8:04:07	8:04:58	52	61.4	58.7	65.1
154	Near Track	8:04:59	8:05:07	9	64.1	62.6	65.3
155	Other	8:05:08	8:05:14	7	66.6	65.2	67.6
156	Near Track	8:05:15	8:05:21	7	66.9	65.3	69.1
157	Background	8:05:22	8:05:28	7	63.2	60.9	64.3
158	Other	8:05:29	8:05:36	8	60.3	59.4	61.4
159	Background	8:05:37	8:05:40	4	66.8	62.9	68.7
160	Other	8:05:41	8:05:48	8	61.9	59.4	65.4
161	Background	8:05:49	8:06:06	18	60.0	59.4	60.9
162	Other	8:06:07	8:06:30	24	60.6	59.1	62.0
163	Background	8:06:31	8:06:47	17	59.5	59.2	60.0
164	Other	8:06:48	8:07:20	33	65.4	59.3	72.4
165	Background	8:07:21	8:07:44	24	63.2	59.1	69.6
166	Other	8:07:45	8:07:52	8	63.9	62.1	65.3
167	Background	8:07:53	8:08:17	25	61.5	59.6	63.2
168	Other	8:08:18	8:09:00	43	63.0	58.4	70.3
169	Background	8:09:01	8:09:49	49	59.9	58.3	62.5
170	Other	8:09:50	8:10:10	21	67.4	60.9	70.5
171	Background	8:10:11	8:10:40	30	62.2	59.1	64.3
172	Other	8:10:41	8:11:14	34	66.4	60.2	70.5
173	Background	8:11:15	8:11:39	25	60.9	58.6	66.6
174	Other	8:11:40	8:11:56	17	66.6	63.0	70.2
175	Near Track	8:11:57	8:11:59	3	63.2	62.6	63.7
176	Other	8:12:00	8:12:10	11	66.2	62.3	69.3
177	Background	8:12:11	8:12:54	44	60.3	58.8	63.0

Table 1.1 Measurement Result of On-site Railway Noise Measurement on 11 December 2025

Events #	Scenario	Start Time	End Time	Time Elapsed (Second)	Leq Average	Leq Minimum	Leq Maximum
178	Other	8:12:55	8:13:06	12	69.0	64.4	72.9
179	Far Track	8:13:07	8:13:08	2	63.6	63.1	64.0
180	Background	8:13:09	8:13:40	32	61.4	58.5	66.3
181	Other	8:13:41	8:13:52	12	65.4	62.8	68.4
182	Background	8:13:53	8:14:28	36	61.6	59.5	64.0
183	Other	8:14:29	8:14:50	22	63.5	59.4	69.0
184	Background	8:14:51	8:14:54	4	60.6	59.7	62.0
185	Other	8:14:55	8:15:08	14	67.3	61.2	73.0
186	Background	8:15:09	8:15:15	7	63.1	61.2	64.2
187	Other	8:15:16	8:15:30	15	64.1	61.8	66.3
188	Background	8:15:31	8:15:37	7	65.3	62.7	67.4
189	Other	8:15:38	8:15:52	15	65.7	61.5	70.3
190	Background	8:15:53	8:16:45	53	61.7	59.3	64.3
191	Other	8:16:46	8:17:00	15	66.0	61.9	72.1
192	Background	8:17:01	8:17:14	14	65.6	61.4	71.5
193	Other	8:17:15	8:17:29	15	63.6	61.5	65.6
194	Background	8:17:30	8:17:32	3	65.6	62.8	67.1
195	Far Track	8:17:33	8:17:40	8	62.3	60.3	65.7
196	Background	8:17:41	8:17:51	11	65.2	60.3	69.7
197	Other	8:17:52	8:18:27	36	61.5	57.6	67.2
198	Background	8:18:28	8:19:03	36	59.2	57.4	62.2
199	Other	8:19:04	8:19:16	13	59.4	57.7	60.8
200	Background	8:19:17	8:19:23	7	61.9	57.8	66.2
201	Other	8:19:24	8:19:36	13	67.3	61.0	72.5
202	Background	8:19:37	8:19:42	6	66.3	62.8	68.3
203	Other	8:19:43	8:20:00	18	63.6	60.9	65.8
204	Background	8:20:01	8:20:22	22	62.4	59.7	65.1
205	Other	8:20:23	8:20:28	6	60.9	60.3	62.1
206	Background	8:20:29	8:20:29	1	62.0	62.0	62.0
207	Other	8:20:30	8:20:37	8	61.1	60.1	62.5
208	Background	8:20:38	8:20:50	13	61.7	60.7	63.0
209	Other	8:20:51	8:20:56	6	60.3	59.5	60.8
210	Background	8:20:57	8:21:38	42	59.4	58.4	62.1
211	Other	8:21:39	8:21:44	6	60.1	58.5	62.3
212	Background	8:21:45	8:22:41	57	59.0	58.2	60.7
213	Other	8:22:42	8:23:13	32	65.6	60.5	71.0
214	Background	8:23:14	8:23:46	33	59.9	58.4	62.9
215	Other	8:23:47	8:24:11	25	64.8	60.1	67.8
216	Background	8:24:12	8:24:20	9	61.4	60.0	63.0
217	Other	8:24:21	8:24:33	13	66.9	61.5	72.5
218	Background	8:24:34	8:24:57	24	62.4	60.1	66.7
219	Other	8:24:58	8:25:08	11	61.4	58.7	65.0
220	Background	8:25:09	8:25:39	31	61.1	57.9	68.6
221	Other	8:25:40	8:25:49	10	69.2	67.7	70.8
222	Near Track	8:25:50	8:26:01	12	66.8	61.2	69.3
223	Background	8:26:02	8:26:37	36	64.3	60.3	70.0
224	Other	8:26:38	8:27:20	43	66.9	59.6	72.1
225	Background	8:27:21	8:27:46	26	62.5	58.9	69.5
226	Other	8:27:47	8:27:58	12	65.4	59.8	70.7
227	Background	8:27:59	8:28:00	2	63.1	62.8	63.3
228	Other	8:28:01	8:28:08	8	61.7	60.4	62.9
229	Background	8:28:09	8:28:26	18	61.7	59.7	65.5
230	Other	8:28:27	8:28:37	11	65.7	64.0	66.9
231	Background	8:28:38	8:29:01	24	62.1	60.8	65.2
232	Other	8:29:02	8:29:10	9	61.5	59.5	63.8
233	Background	8:29:11	8:29:40	30	62.1	59.1	65.5
234	Other	8:29:41	8:29:50	10	66.6	59.6	70.0
235	Background	8:29:51	8:30:31	41	60.2	58.7	61.9
236	Far Track	8:30:32	8:30:43	12	63.1	59.5	67.1

Table 1.1 Measurement Result of On-site Railway Noise Measurement on 11 December 2025

Events #	Scenario	Start Time	End Time	Time Elapsed (Second)	Leq Average	Leq Minimum	Leq Maximum
237	Background	8:30:44	8:31:26	43	60.1	58.8	64.3
238	Other	8:31:27	8:31:49	23	69.2	64.3	72.0
239	Background	8:31:50	8:32:01	12	61.7	59.2	64.0
240	Near Track	8:32:02	8:32:17	16	59.9	58.2	61.9
241	Background	8:32:18	8:32:52	35	59.1	58.2	59.8
242	Other	8:32:53	8:33:04	12	62.9	58.7	68.3
243	Background	8:33:05	8:33:36	32	59.4	58.2	62.4
244	Other	8:33:37	8:33:43	7	62.6	59.4	64.9
245	Background	8:33:44	8:34:50	67	60.7	58.6	63.8
246	Other	8:34:51	8:34:53	3	60.5	59.6	61.4
247	Background	8:34:54	8:35:18	25	58.7	57.7	62.6
248	Other	8:35:19	8:35:31	13	67.0	63.3	70.1
249	Background	8:35:32	8:35:41	10	63.6	62.1	67.6
250	Other	8:35:42	8:35:55	14	67.3	61.0	70.1
251	Background	8:35:56	8:36:19	24	62.0	59.5	68.1
252	Other	8:36:20	8:36:29	10	61.2	58.4	64.5
253	Background	8:36:30	8:36:44	15	58.6	58.1	59.4
254	Other	8:36:45	8:36:49	5	58.8	58.4	59.2
255	Background	8:36:50	8:36:58	9	62.7	59.1	65.6
256	Near Track	8:36:59	8:37:08	10	63.8	61.1	67.3
257	Other	8:37:09	8:37:16	8	68.0	66.5	69.9
258	Near Track	8:37:17	8:37:21	5	63.1	61.0	65.5
259	Background	8:37:22	8:37:34	13	64.9	60.8	71.2
260	Other	8:37:35	8:37:45	11	70.3	66.4	74.8
261	Far Track	8:37:46	8:37:49	4	65.7	64.6	66.4
262	Background	8:37:50	8:38:22	33	60.8	59.3	63.9
263	Other	8:38:23	8:38:54	32	66.1	61.3	72.4
264	Background	8:38:55	8:39:39	45	59.5	58.3	61.4
265	Other	8:39:40	8:39:51	12	66.7	59.5	70.8
266	Background	8:39:52	8:40:10	19	60.7	59.4	64.1
267	Far Track	8:40:11	8:40:21	11	64.2	59.5	69.2
268	Background	8:40:22	8:40:31	10	62.8	60.7	67.3
269	Other	8:40:32	8:40:46	15	68.2	61.6	71.9
270	Background	8:40:47	8:40:56	10	63.4	61.0	67.8
271	Other	8:40:57	8:41:05	9	66.6	64.7	69.5
272	Background	8:41:06	8:41:24	19	61.7	59.9	64.3
273	Other	8:41:25	8:41:52	28	66.7	61.7	72.1
274	Background	8:41:53	8:42:32	40	60.6	59.4	63.7
275	Other	8:42:33	8:42:40	8	61.2	59.6	63.6
276	Background	8:42:41	8:42:54	14	60.9	58.8	66.3
277	Other	8:42:55	8:43:06	12	60.4	58.4	61.9
278	Background	8:43:07	8:43:38	32	60.1	58.3	63.4
279	Other	8:43:39	8:43:42	4	60.3	60.0	60.9
280	Background	8:43:43	8:45:39	117	60.7	58.0	66.3
281	Other	8:45:40	8:46:03	24	65.9	60.0	71.5
282	Background	8:46:04	8:46:22	19	60.2	58.9	62.7
283	Other	8:46:23	8:46:47	25	65.7	62.7	69.1
284	Background	8:46:48	8:46:55	8	64.9	64.1	65.5
285	Other	8:46:56	8:47:06	11	67.3	64.3	70.0
286	Background	8:47:07	8:47:55	49	63.0	58.9	68.5
287	Other	8:47:56	8:48:12	17	59.7	59.2	60.8
288	Background	8:48:13	8:48:30	18	62.3	59.0	67.4
289	Other	8:48:31	8:48:35	5	61.0	60.2	62.5
290	Near Track	8:48:36	8:48:41	6	59.9	59.7	60.4
291	Background	8:48:42	8:48:43	2	59.9	59.6	60.1
292	Other	8:48:44	8:48:56	13	60.5	58.7	62.0
293	Background	8:48:57	8:49:26	30	60.5	58.6	65.3
294	Other	8:49:27	8:49:31	5	60.5	59.6	61.3
295	Background	8:49:32	8:49:50	19	61.9	60.5	63.6

Table 1.1 Measurement Result of On-site Railway Noise Measurement on 11 December 2025

Events #	Scenario	Start Time	End Time	Time Elapsed (Second)	Leq Average	Leq Minimum	Leq Maximum
296	Other	8:49:51	8:50:08	18	64.6	60.2	67.7
297	Background	8:50:09	8:50:40	32	61.9	59.9	66.4
298	Far Track	8:50:41	8:50:47	7	68.1	66.6	69.2
299	Other	8:50:48	8:50:53	6	61.6	59.6	64.8
300	Background	8:50:54	8:51:46	53	60.8	57.9	67.7
301	Other	8:51:47	8:51:51	5	61.1	60.0	62.2
302	Background	8:51:52	8:52:18	27	61.5	59.3	67.0
303	Other	8:52:19	8:52:29	11	66.5	62.4	69.6
304	Background	8:52:30	8:52:40	11	60.7	59.1	62.1
305	Other	8:52:41	8:52:43	3	59.2	59.1	59.3
306	Background	8:52:44	8:52:56	13	60.2	59.4	62.4
307	Other	8:52:57	8:53:07	11	67.0	60.9	70.8
308	Background	8:53:08	8:53:37	30	63.8	60.8	66.1
309	Other	8:53:38	8:53:45	8	63.1	60.3	66.5
310	Background	8:53:46	8:54:34	49	62.1	58.6	68.9
311	Other	8:54:35	8:54:55	21	67.3	62.1	71.1
312	Background	8:54:56	8:55:37	42	61.0	59.2	64.5
313	Near Track	8:55:38	8:55:38	1	63.7	63.7	63.7
314	Other	8:55:39	8:55:57	19	66.8	61.8	70.0
315	Background	8:55:58	8:56:30	33	64.0	60.5	66.0
316	Far Track	8:56:31	8:56:40	10	65.2	61.1	70.1
317	Background	8:56:41	8:57:12	32	61.1	59.1	63.1
318	Other	8:57:13	8:57:28	16	63.0	60.7	66.0
319	Background	8:57:29	8:57:30	2	65.0	63.2	66.3
320	Other	8:57:31	8:57:37	7	60.8	59.4	62.3
321	Background	8:57:38	8:57:46	9	64.1	60.0	67.4
322	Other	8:57:47	8:57:54	8	62.5	59.5	65.9
323	Background	8:57:55	8:58:24	30	60.0	58.9	61.4
324	Other	8:58:25	8:58:42	18	64.5	61.1	66.9
325	Background	8:58:43	8:58:49	7	61.3	60.5	61.9
326	Other	8:58:50	8:58:56	7	68.6	63.2	71.2
327	Background	8:58:57	8:59:07	11	65.9	61.5	69.4
328	Other	8:59:08	8:59:15	8	66.6	63.8	68.5
329	Background	8:59:16	8:59:56	41	62.1	59.6	67.9
330	Other	8:59:57	9:00:20	24	59.4	57.7	60.7
331	Background	9:00:21	9:00:40	20	61.4	58.1	66.5
332	Other	9:00:41	9:00:53	13	72.4	60.6	76.6
333	Background	9:00:54	9:02:00	67	63.2	57.2	69.0
						Max	76.6

Remark :

- 1) Event "Near Track" refer to the track heading to Fung Tei Station.
- 2) Event "Far Track" refer to the track heading to Siu Hong Station.
- 3) Event "Other" refer to cases where noise emissions originate from nearby LRT tracks, the Siu Hong Station (South) Public Transport Interchange, or when both of the tracks of concern (Near Track and Far Track) have noise emissions simultaneously.
- 4) Events "Background" refer to the periods with no vehicle movement along the LRT tracks or within the Siu Hong Station (South) Public Transport Interchange.

Appendix C8

Reply from MTRC

MTR Corporation Limited
香港鐵路有限公司
www.mtr.com.hk



Urban Green Consultants Limited
23/F, Wui Tat Centre,
55 Connaught Road West,
Sheung Wan, Hong Kong

Our ref: T&ESD/E&IC/ES/EnvE/L1307

Date: 14 JAN 2026

Attention: Ms. Joan CHOI

By Post and Fax
(Fax no.:3114 1580)

Dear Ms. Choi,

Re: Request information of the Trains Operation at Siu Hong Station for Rezoning Application for the Proposed Land Exchange for Social Welfare Facility and Public Carpark at 496 S.C in D.D. 132 and the adjoining Government Land

We refer to your letter (ref.: UGC-LRT-P166-002) dated 4 December 2025 requesting information regarding Tuen Ma Line (TML) and Light Rail Transit (LRT).

Operational Information for TML (between Siu Hong Station and Tuen Mun Station)

- The future ultimate daily peak operating train frequency during the period of 07:00-23:00 hours is about 28 trains per hour per direction.
- For the future ultimate daily peak operating train frequency during the period of 23:00-07:00 hours, please refer to the latest Environmental Permit (EP) for West Rail available via the EPD website.
- The current maximum train speed for the track section between Siu Hong Station (SIH) and Tuen Mun Station (TUM) is 85 km/h for up track (SIH-TUM) and 80 km/h for down track (TUM-SIH).
- There are currently 8 cars per train for the operation condition of TML. However, according to the latest Environmental Permit (EP) for West Rail, the ultimate maximum train cars would be 9 cars.

Operational Information for LRT

- The current peak train frequency between Siu Hong Stop and Fung Tei Stop (Routes 614 and 614P only) during the period of 07:00-23:00 hours and 23:00-07:00 hours is about 5 trains per 30 minutes per direction.
- The current peak train frequency between Siu Hong Stop and Tuen Mun Hospital Stop (Routes 610 and 751 only) during the period of 07:00-23:00 hours and 23:00-07:00 hours is about 8 trains per 30 minutes per direction.
- The current peak train frequency between Siu Hong Stop and Kei Lun Stop/ Ching Chung Stop (Routes 505 and 615 only) during the period of 07:00-23:00 hours and 23:00-07:00 hours is about 6 trains per 30 minutes per direction.

MTR Corporation Limited
香港鐵路有限公司
www.mtr.com.hk



Our ref: T&ESD/E&IC/ES/EnvE/L1307

Date: 14 JAN 2026

- Please note that the Light Rail service frequencies are subject to change without prior notification due to future patronage growth. As such, please consider allowing a buffer on the assessment assumptions when estimating future possible environmental impacts.
- The current maximum train speed for the concerned sections is 60 km/h for both directions.
- There are different types of Light Rail vehicles currently operating on LRT. The arrangement of single or coupled-set vehicles will vary depending on the traffic needs and is subject to change without prior notification. For environmental assessment purpose, you may wish to work on the assumption that all vehicles are in couple-set where appropriate.

Please be reminded that any information that may come to your knowledge or come into your possession from MTR Corporation Limited shall only be used solely as reference for this captioned project. Further distribution and/or publication of the above information for purposes not connected with the captioned project are strictly prohibited without the prior consent of MTR Corporation Limited. Please also note that any such information is subject to change without prior notification.

Should you have any additional enquiries, please feel free to contact the undersigned at 2993-4127.

Yours sincerely,~

A handwritten signature in black ink, appearing to be 'Catherine Leung', written over a horizontal line.

Catherine Leung
Lead Environmental Manager

Appendix C9

Detailed Calculation of Rail Noise

Table 1.1 Records of On-site Background Noise Measurement on 11 December 2025

Events #	Scenario	Start Time	End Time	Time Elapsed (Second)	Leq Average	Leq Minimum	Leq Maximum
1	Background	7:02:01	7:04:59	179	65.2	57.6	74.5
3	Background	7:05:20	7:05:46	27	64.2	60.2	68.1
5	Background	7:06:30	7:06:39	10	67.2	61.3	71.5
7	Background	7:06:48	7:08:21	94	61.9	58.8	67.5
9	Background	7:08:47	7:09:14	28	63.2	59.4	67.8
11	Background	7:09:49	7:09:51	3	60.2	59.9	60.6
13	Background	7:10:01	7:10:02	2	58.5	58.3	58.6
15	Background	7:10:11	7:10:54	44	61.3	59.3	63.7
17	Background	7:11:07	7:11:14	8	67.2	65.1	70.1
19	Background	7:11:38	7:11:47	10	63.7	60.1	69.4
21	Background	7:12:16	7:13:02	47	59.6	58.0	63.0
25	Background	7:13:49	7:13:50	2	67.7	67.7	67.7
27	Background	7:13:56	7:13:59	4	68.4	68.0	68.8
29	Background	7:14:15	7:14:21	7	62.7	61.7	64.1
31	Background	7:14:37	7:14:59	23	62.2	60.8	67.5
33	Background	7:15:17	7:15:24	8	62.4	60.2	65.8
35	Background	7:16:18	7:17:40	83	61.3	58.6	68.2
37	Background	7:18:04	7:19:24	81	59.4	57.9	61.8
40	Background	7:20:01	7:21:40	100	59.0	57.2	63.3
42	Background	7:22:01	7:22:20	20	66.5	61.6	70.2
44	Background	7:22:36	7:22:41	6	63.8	63.0	64.5
46	Background	7:22:56	7:23:43	48	61.6	57.8	65.8
48	Background	7:24:11	7:24:30	20	63.2	60.5	66.3
50	Background	7:24:42	7:25:00	19	65.2	62.1	68.8
52	Background	7:25:20	7:25:54	35	62.2	58.8	65.1
55	Background	7:26:18	7:26:59	42	62.5	58.2	68.3
57	Background	7:27:24	7:27:39	16	59.0	58.4	60.5
59	Background	7:28:18	7:28:23	6	61.0	59.4	62.7
61	Background	7:28:36	7:29:34	59	61.6	57.7	65.6
63	Background	7:29:46	7:29:54	9	59.7	58.7	60.7
65	Background	7:30:01	7:30:05	5	59.0	58.7	59.7
67	Background	7:30:24	7:30:33	10	59.6	59.1	60.6
69	Background	7:30:43	7:31:10	28	61.3	58.5	67.2
72	Background	7:32:21	7:32:41	21	62.6	59.5	68.2
74	Background	7:33:01	7:33:31	31	59.6	58.1	61.8
76	Background	7:33:52	7:34:19	28	61.0	58.4	65.3
78	Background	7:34:27	7:34:49	23	61.3	59.3	64.3
80	Background	7:35:04	7:35:12	9	64.0	62.4	65.5
82	Background	7:35:30	7:35:33	4	60.6	60.3	60.9
84	Background	7:35:46	7:36:06	21	58.5	57.6	59.9
86	Background	7:36:44	7:36:59	16	64.3	60.1	68.0
89	Background	7:37:37	7:37:38	2	61.1	61.1	61.1
92	Background	7:38:02	7:38:49	48	60.2	58.1	63.2
94	Background	7:39:05	7:39:36	32	59.3	57.8	63.1
96	Background	7:41:17	7:41:35	19	62.4	59.3	65.0
98	Background	7:42:27	7:43:24	58	59.8	58.8	62.2
100	Background	7:45:31	7:45:36	6	61.7	60.6	63.2

102	Background	7:46:10	7:46:39	30	63.8	60.1	67.8
104	Background	7:47:18	7:47:32	15	62.6	61.1	64.7
106	Background	7:47:47	7:48:02	16	60.7	59.0	63.3
108	Background	7:48:11	7:48:20	10	62.2	59.0	65.9
110	Background	7:49:03	7:49:42	40	59.5	58.3	62.4
112	Background	7:50:08	7:50:36	29	60.0	58.4	63.7
114	Background	7:50:48	7:50:58	11	65.7	63.0	67.5
116	Background	7:51:09	7:51:33	25	59.7	58.4	62.1
118	Background	7:52:01	7:52:08	8	64.4	61.8	66.2
120	Background	7:52:14	7:52:21	8	62.7	59.8	66.5
122	Background	7:52:40	7:53:00	21	61.1	57.7	65.6
124	Background	7:53:08	7:53:32	25	62.0	58.8	65.1
126	Background	7:53:48	7:54:41	54	60.1	57.6	64.8
128	Background	7:54:56	7:55:40	45	59.9	58.1	65.1
131	Background	7:55:58	7:56:29	32	62.3	58.6	65.3
134	Background	7:56:48	7:57:39	52	58.7	57.3	61.7
136	Background	7:58:01	7:58:25	25	64.9	59.2	68.8
138	Background	7:58:42	7:58:52	11	60.3	59.3	61.8
140	Background	7:59:06	7:59:32	27	58.7	58.1	59.9
142	Background	7:59:59	8:00:36	38	61.0	59.2	63.8
144	Background	8:00:46	8:01:03	18	59.3	58.2	61.2
147	Background	8:01:37	8:01:46	10	65.0	63.6	66.8
149	Background	8:02:02	8:02:42	41	59.8	58.3	62.5
151	Background	8:03:11	8:03:32	22	62.2	59.6	69.3
153	Background	8:04:07	8:04:58	52	61.4	58.7	65.1
157	Background	8:05:22	8:05:28	7	63.2	60.9	64.3
159	Background	8:05:37	8:05:40	4	66.8	62.9	68.7
161	Background	8:05:49	8:06:06	18	60.0	59.4	60.9
163	Background	8:06:31	8:06:47	17	59.5	59.2	60.0
165	Background	8:07:21	8:07:44	24	63.2	59.1	69.6
167	Background	8:07:53	8:08:17	25	61.5	59.6	63.2
169	Background	8:09:01	8:09:49	49	59.9	58.3	62.5
171	Background	8:10:11	8:10:40	30	62.2	59.1	64.3
173	Background	8:11:15	8:11:39	25	60.9	58.6	66.6
177	Background	8:12:11	8:12:54	44	60.3	58.8	63.0
180	Background	8:13:09	8:13:40	32	61.4	58.5	66.3
182	Background	8:13:53	8:14:28	36	61.6	59.5	64.0
184	Background	8:14:51	8:14:54	4	60.6	59.7	62.0
186	Background	8:15:09	8:15:15	7	63.1	61.2	64.2
188	Background	8:15:31	8:15:37	7	65.3	62.7	67.4
190	Background	8:15:53	8:16:45	53	61.7	59.3	64.3
192	Background	8:17:01	8:17:14	14	65.6	61.4	71.5
194	Background	8:17:30	8:17:32	3	65.6	62.8	67.1
196	Background	8:17:41	8:17:51	11	65.2	60.3	69.7
198	Background	8:18:28	8:19:03	36	59.2	57.4	62.2
200	Background	8:19:17	8:19:23	7	61.9	57.8	66.2
202	Background	8:19:37	8:19:42	6	66.3	62.8	68.3
204	Background	8:20:01	8:20:22	22	62.4	59.7	65.1
206	Background	8:20:29	8:20:29	1	62.0	62.0	62.0
208	Background	8:20:38	8:20:50	13	61.7	60.7	63.0
210	Background	8:20:57	8:21:38	42	59.4	58.4	62.1

212	Background	8:21:45	8:22:41	57	59.0	58.2	60.7
214	Background	8:23:14	8:23:46	33	59.9	58.4	62.9
216	Background	8:24:12	8:24:20	9	61.4	60.0	63.0
218	Background	8:24:34	8:24:57	24	62.4	60.1	66.7
220	Background	8:25:09	8:25:39	31	61.1	57.9	68.6
223	Background	8:26:02	8:26:37	36	64.3	60.3	70.0
225	Background	8:27:21	8:27:46	26	62.5	58.9	69.5
227	Background	8:27:59	8:28:00	2	63.1	62.8	63.3
229	Background	8:28:09	8:28:26	18	61.7	59.7	65.5
231	Background	8:28:38	8:29:01	24	62.1	60.8	65.2
233	Background	8:29:11	8:29:40	30	62.1	59.1	65.5
235	Background	8:29:51	8:30:31	41	60.2	58.7	61.9
237	Background	8:30:44	8:31:26	43	60.1	58.8	64.3
239	Background	8:31:50	8:32:01	12	61.7	59.2	64.0
241	Background	8:32:18	8:32:52	35	59.1	58.2	59.8
243	Background	8:33:05	8:33:36	32	59.4	58.2	62.4
245	Background	8:33:44	8:34:50	67	60.7	58.6	63.8
247	Background	8:34:54	8:35:18	25	58.7	57.7	62.6
249	Background	8:35:32	8:35:41	10	63.6	62.1	67.6
251	Background	8:35:56	8:36:19	24	62.0	59.5	68.1
253	Background	8:36:30	8:36:44	15	58.6	58.1	59.4
255	Background	8:36:50	8:36:58	9	62.7	59.1	65.6
259	Background	8:37:22	8:37:34	13	64.9	60.8	71.2
262	Background	8:37:50	8:38:22	33	60.8	59.3	63.9
264	Background	8:38:55	8:39:39	45	59.5	58.3	61.4
266	Background	8:39:52	8:40:10	19	60.7	59.4	64.1
268	Background	8:40:22	8:40:31	10	62.8	60.7	67.3
270	Background	8:40:47	8:40:56	10	63.4	61.0	67.8
272	Background	8:41:06	8:41:24	19	61.7	59.9	64.3
274	Background	8:41:53	8:42:32	40	60.6	59.4	63.7
276	Background	8:42:41	8:42:54	14	60.9	58.8	66.3
278	Background	8:43:07	8:43:38	32	60.1	58.3	63.4
280	Background	8:43:43	8:45:39	117	60.7	58.0	66.3
282	Background	8:46:04	8:46:22	19	60.2	58.9	62.7
284	Background	8:46:48	8:46:55	8	64.9	64.1	65.5
286	Background	8:47:07	8:47:55	49	63.0	58.9	68.5
288	Background	8:48:13	8:48:30	18	62.3	59.0	67.4
291	Background	8:48:42	8:48:43	2	59.9	59.6	60.1
293	Background	8:48:57	8:49:26	30	60.5	58.6	65.3
295	Background	8:49:32	8:49:50	19	61.9	60.5	63.6
297	Background	8:50:09	8:50:40	32	61.9	59.9	66.4
300	Background	8:50:54	8:51:46	53	60.8	57.9	67.7
302	Background	8:51:52	8:52:18	27	61.5	59.3	67.0
304	Background	8:52:30	8:52:40	11	60.7	59.1	62.1
306	Background	8:52:44	8:52:56	13	60.2	59.4	62.4
308	Background	8:53:08	8:53:37	30	63.8	60.8	66.1
310	Background	8:53:46	8:54:34	49	62.1	58.6	68.9
312	Background	8:54:56	8:55:37	42	61.0	59.2	64.5
315	Background	8:55:58	8:56:30	33	64.0	60.5	66.0
317	Background	8:56:41	8:57:12	32	61.1	59.1	63.1
319	Background	8:57:29	8:57:30	2	65.0	63.2	66.3

321	Background	8:57:38	8:57:46	9	64.1	60.0	67.4
323	Background	8:57:55	8:58:24	30	60.0	58.9	61.4
325	Background	8:58:43	8:58:49	7	61.3	60.5	61.9
327	Background	8:58:57	8:59:07	11	65.9	61.5	69.4
329	Background	8:59:16	8:59:56	41	62.1	59.6	67.9
331	Background	9:00:21	9:00:40	20	61.4	58.1	66.5
333	Background	9:00:54	9:02:00	67	63.2	57.2	69.0

Average Background Leq	61.9
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Table 1.2 Records of On-site Far Track Noise Measurement on 11 December 2025

Events #	Scenario	Start Time	End Time	Time Elapsed (Second)	Leq Average	Leq Minimum	Leq Maximum	SEL (Subtract Background Noise)
18*	Far Track	7:11:15	7:11:37	23	61.7	59.0	67.0	75.4
38	Far Track	7:19:25	7:19:34	10	62.5	59.4	65.9	72.5
53*	Far Track	7:25:55	7:25:55	1	61.3	61.3	61.3	61.3
90	Far Track	7:37:39	7:37:42	4	63.9	62.7	65.3	69.9
121	Far Track	7:52:22	7:52:39	18	65.3	57.8	71.2	77.9
130	Far Track	7:55:51	7:55:57	7	63.2	60.4	65.1	71.6
179	Far Track	8:13:07	8:13:08	2	63.6	63.1	64.0	66.6
195	Far Track	8:17:33	8:17:40	8	62.3	60.3	65.7	71.3
236	Far Track	8:30:32	8:30:43	12	63.1	59.5	67.1	73.9
261	Far Track	8:37:46	8:37:49	4	65.7	64.6	66.4	71.7
267	Far Track	8:40:11	8:40:21	11	64.2	59.5	69.2	74.6
298	Far Track	8:50:41	8:50:47	7	68.1	66.6	69.2	76.5
316	Far Track	8:56:31	8:56:40	10	65.2	61.1	70.1	75.2

*Omitted as average Leq lower than background noise level.

SEL (Subtract Background Noise) - Weighted Average 71.6

Table 1.3 Records of On-site Near Track Noise Measurement on 11 December 2025

Events #	Scenario	Start Time	End Time	Time Elapsed (Second)	Leq Average	Leq Minimum	Leq Maximum	SEL (Subtract Background Noise)
23	Near Track	7:13:14	7:13:37	24	64.5	60.7	68.4	78.3
41	Near Track	7:21:41	7:22:00	20	62.0	60.7	63.2	75.0
49	Near Track	7:24:31	7:24:41	11	64.3	61.4	68.3	74.7
56	Near Track	7:27:00	7:27:23	24	60.9	58.7	63.3	74.7
70	Near Track	7:31:11	7:31:40	30	65.4	60.0	68.6	80.2
79	Near Track	7:34:50	7:35:03	14	62.2	60.1	64.6	73.6
88	Near Track	7:37:17	7:37:36	20	58.7	58.0	60.6	71.7
132	Near Track	7:56:30	7:56:35	6	62.9	61.8	63.4	70.6
146	Near Track	8:01:27	8:01:36	10	63.1	61.4	64.6	73.1
154	Near Track	8:04:59	8:05:07	9	64.1	62.6	65.3	73.6
156	Near Track	8:05:15	8:05:21	7	66.9	65.3	69.1	75.4
175	Near Track	8:11:57	8:11:59	3	63.2	62.6	63.7	67.9
222	Near Track	8:25:50	8:26:01	12	66.8	61.2	69.3	77.6
240	Near Track	8:32:02	8:32:17	16	59.9	58.2	61.9	71.9
256	Near Track	8:36:59	8:37:08	10	63.8	61.1	67.3	73.8
258	Near Track	8:37:17	8:37:21	5	63.1	61.0	65.5	70.1
290	Near Track	8:48:36	8:48:41	6	59.9	59.7	60.4	67.7
313	Near Track	8:55:38	8:55:38	1	63.7	63.7	63.7	63.7

*Omitted as average Leq lower than background noise level.

SEL (Subtract Background Noise) - Weight Average 73.4

Table 2.1 - Calculation of Predicted Noise Level (Segment 1)

Railway Noise Impact Assessment													
		Near Track (To Fung Tei Station)						Far Track (To Siu Hong Station)					
Average Sound Exposure Level, SEL	dB(A)	73.4						71.6					
Correction a) to d)													
a) Train Frequency (Q) in 30 min.		5.0						5.0					
a) Train Frequency Correction, TFC	dB(A)	7.0						7.0					
b) Angle of View at Measurement Point	degree	170.0						170.0					
b) Acute Angle (Degree)	degree	83.0						83.0					
b) View Angle Correction, VAC	dB(A)	-0.04						-0.04					
c) Conversion to L _{day(30mins)} , CL	dB(A)	-32.6						-32.6					
d) facade correction	dB(A)	3.0						3.0					
Correction e) to f)													
e) Distance Between Measurment Point to Track	m	25.0						30.5					
e) Horizontal Distance to Track	m	R9 (4/F)	R10 (4/F)	R11 (4/F)	R12 (4/F)	R13 (4/F)	R14 (4/F)	R9 (4/F)	R10 (4/F)	R11 (4/F)	R12 (4/F)	R13 (4/F)	R14 (4/F)
e) Vertical Distance to Track	m	223.7	226.3	228.8	231.1	233.5	235.9	227.4	230.1	232.6	234.3	236.9	239.2
e) Slant Distance to Track	m	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
e) Distance Correction, DC	dB(A)	223.7	226.3	228.8	231.1	233.5	235.9	227.4	230.1	232.6	234.3	236.9	239.2
f) Angle of View at NSR	degree	-9.5	-9.6	-9.6	-9.7	-9.7	-9.7	-8.7	-8.8	-8.8	-8.9	-8.9	-8.9
f) Acute Angle	degree	23.0	23.0	23.0	23.0	22.0	22.0	23.0	23.0	23.0	23.0	22.0	22.0
f) View Angle Correction, VAC	dB(A)	49.5	49.5	48.5	48.5	47.0	47.0	49.5	49.5	48.5	48.5	47.0	47.0
g) Current Max Train Speed of track	km/h	-8.3	-8.3	-8.5	-8.5	-8.9	-8.9	-8.3	-8.3	-8.5	-8.5	-8.9	-8.9
g) Assumed future Max Train Speed of track	km/h	60.0	60.0					60.0					
g) Train Speed Correction (TFC)	dB(A)	60.0						60.0					
h) Maintenance Factor (MFC)	dB(A)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Predicted Noise Level (Leq, 30mins), PNL	dB(A)	36.0	35.9	35.7	35.7	35.3	35.2	34.9	34.9	34.7	34.7	34.2	34.2

Table 2.2 - Calculation of Predicted Noise Level (Segment 2)

Railway Noise Impact Assessment																													
		Near Track (To Fung Tei Station)														Far Track (To Siu Hong Station)													
Average Sound Exposure Level, SEL	dB(A)	73.4														71.6													
Correction a) to d)																													
a) Train Frequency (Q) in 30 min.		5.0														5.0													
a) Train Frequency Correction, TFC	dB(A)	7.0														7.0													
b) Angle of View at Measurement Point	degree	170.0														170.0													
b) Acute Angle (Degree)	degree	83.0														83.0													
b) View Angle Correction, VAC	dB(A)	-0.04														-0.04													
c) Conversion to L _{Aeq(30min)} , CL _c	dB(A)	-32.6														-32.6													
d) facade correction	dB(A)	3.0														3.0													
Correction e) to f)																													
e) Distance Between Measurment Point to Track	m	25.0														30.5													
		R1 (4/F)	R2 (4/F)	R3 (4/F)	R4 (4/F)	R5 (4/F)	R6 (4/F)	R7 (4/F)	R8 (4/F)	R9 (4/F)	R10 (4/F)	R11 (4/F)	R12 (4/F)	R13 (4/F)	R14 (4/F)	R1 (4/F)	R2 (4/F)	R3 (4/F)	R4 (4/F)	R5 (4/F)	R6 (4/F)	R7 (4/F)	R8 (4/F)	R9 (4/F)	R10 (4/F)	R11 (4/F)	R12 (4/F)	R13 (4/F)	R14 (4/F)
e) Horizontal Distance to Track	m	219.3	223.0	226.6	230.5	233.7	237.4	240.4	245.0	231.1	234.8	238.3	240.3	244.1	248.5	223.3	227.2	230.9	234.8	237.1	241.5	244.0	248.2	234.4	239.2	242.6	244.1	248.5	252.3
e) Vertical Distance to Track	m	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
e) Slant Distance to Track	m	219.3	223.0	226.6	230.5	233.7	237.4	240.4	245.0	231.1	234.8	238.3	240.3	244.1	248.5	223.3	227.2	230.9	234.8	237.1	241.5	244.0	248.2	234.4	239.2	242.6	244.1	248.5	252.3
e) Distance Correction, DC	dB(A)	-9.4	-9.5	-9.6	-9.6	-9.7	-9.8	-9.8	-9.9	-9.7	-9.7	-9.8	-9.8	-9.9	-10.0	-8.6	-8.7	-8.8	-8.9	-8.9	-9.0	-9.0	-9.1	-8.9	-8.9	-9.0	-9.0	-9.1	-9.2
f) Angle of View at NSR	degree	18.0	18.0	18.0	17.0	17.0	17.0	17.0	16.0	15.0	17.0	17.0	16.0	16.0	16.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0	16.0	15.0	17.0	17.0	16.0	16.0	16.0
f) Acute Angle	degree	12.0	12.0	11.0	10.5	10.5	10.5	10.5	10.0	31.5	29.5	29.5	28.0	28.0	28.0	12.0	12.0	11.0	10.5	10.5	10.5	10.5	10.0	31.5	29.5	29.5	28.0	28.0	28.0
f) View Angle Correction, VAC	dB(A)	-20.0	-20.0	-20.6	-21.2	-21.2	-21.2	-21.2	-21.9	-13.4	-13.4	-13.4	-14.0	-14.0	-14.0	-20.0	-20.0	-20.6	-21.2	-21.2	-21.2	-21.2	-21.9	-13.4	-13.4	-13.4	-14.0	-14.0	-14.0
g) Current Max Train Speed of track	km/h	60.0														60.0													
g) Assumed future Max Train Speed of track	km/h	60.0														60.0													
g) Train Speed Correction (TFC)	dB(A)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
h) Maintenance Factor (MFC)	dB(A)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Predicted Noise Level (Leq, 30mins), PNL	dB(A)	24.4	24.4	23.7	22.9	22.9	22.8	22.8	22.0	30.8	30.8	30.7	30.0	29.9	29.8	23.4	23.3	22.6	21.9	21.9	21.8	21.7	21.0	29.7	29.7	29.6	28.9	28.9	28.8

Table 2.3 - Calculation of Predicted Noise Level (Segment 3)

Railway Noise Impact Assessment																													
		Near Track (To Fung Tei Station)														Far Track (To Siu Hong Station)													
Average Sound Exposure Level, SEL	dB(A)	73.4														71.6													
Correction a) to d)																													
a) Train Frequency (Q) in 30 min.		5.0														5.0													
a) Train Frequency Correction, TFC	dB(A)	7.0														7.0													
b) Angle of View at Measurement Point	degree	170.0														170.0													
b) Acute Angle (Degree)	degree	83.0														83.0													
b) View Angle Correction, VAC	dB(A)	-0.04														-0.04													
c) Conversion to L _{Aeq(30min)} , CL _e	dB(A)	-32.6														-32.6													
d) façade correction	dB(A)	3.0														3.0													
Correction e) to f)																													
e) Distance Between Measurement Point to Track	m	25.0														30.5													
		R1 (4/F)	R2 (4/F)	R3 (4/F)	R4 (4/F)	R5 (4/F)	R6 (4/F)	R7 (4/F)	R8 (4/F)	R10 (4/F)	R11 (4/F)	R12 (4/F)	R13 (4/F)	R14 (4/F)	R1 (4/F)	R2 (4/F)	R3 (4/F)	R4 (4/F)	R5 (4/F)	R6 (4/F)	R7 (4/F)	R8 (4/F)	R10 (4/F)	R11 (4/F)	R12 (4/F)	R13 (4/F)	R14 (4/F)		
e) Horizontal Distance to Track	m	229.3	231.1	235.6	238.9	242.1	245.4	248.4	250.4	246.4	250.8	254.4	259.8	261.2	232.3	237.1	240.3	243.5	245.3	248.5	251.5	255.0	250.7	255.3	258.8	262.8	266.2		
e) Vertical Distance to Track	m	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9		
e) Slant Distance to Track	m	229.3	231.1	235.6	238.9	242.1	245.4	248.4	250.4	246.4	250.8	254.4	259.8	261.2	232.3	237.1	240.3	243.5	245.3	248.5	251.5	255.0	250.7	255.3	258.8	262.8	266.2		
e) Distance Correction, DC	dB(A)	-9.6	-9.7	-9.7	-9.8	-9.9	-9.9	-10.0	-10.0	-9.9	-10.0	-10.1	-10.2	-10.2	-8.8	-8.9	-9.0	-9.0	-9.1	-9.1	-9.2	-9.2	-9.1	-9.2	-9.3	-9.4	-9.4		
f) Angle of View at NSR	degree	19.0	19.0	18.0	18.0	18.0	18.0	17.0	17.0	6.0	11.0	12.0	13.0	14.0	19.0	19.0	18.0	18.0	18.0	18.0	17.0	17.0	6.0	11.0	12.0	13.0	14.0		
f) Acute Angle	degree	30.5	30.5	29.0	29.0	29.0	28.0	27.5	27.5	18.0	15.5	14.0	13.5	13.0	30.5	30.5	29.0	29.0	29.0	28.0	27.5	27.5	18.0	15.5	14.0	13.5	13.0		
f) View Angle Correction, VAC	dB(A)	-12.6	-12.6	-13.2	-13.2	-13.2	-13.5	-13.9	-13.9	-22.0	-20.5	-20.9	-20.8	-20.7	-12.6	-12.6	-13.2	-13.2	-13.2	-13.5	-13.9	-13.9	-22.0	-20.5	-20.9	-20.8	-20.7		
g) Current Max Train Speed of track	km/h	60.0														60.0													
g) Assumed future Max Train Speed of track	km/h	60.0														60.0													
g) Train Speed Correction (TEC)	dB(A)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
h) Maintenance Factor (MFC)	dB(A)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Predicted Noise Level (Leq, 30mins), PNL	dB(A)	31.6	31.6	30.9	30.8	30.7	30.4	30.0	29.9	21.9	23.4	22.9	22.9	22.9	30.6	30.5	29.8	29.8	29.7	29.4	29.0	28.9	20.9	22.3	21.8	21.9	21.9		

Table 2.4 - Calculation of Predicted Noise Level (Segment 4)

Railway Noise Impact Assessment																	
		Near Track (To Fung Tei Station)								Far Track (To Siu Hong Station)							
Average Sound Exposure Level, SEL	dB(A)	73.4								71.6							
Correction a) to d)																	
a) Train Frequency (Q) in 30 min.		5.0								5.0							
a) Train Frequency Correction, TEC	dB(A)	7.0								7.0							
b) Angle of View at Measurement Point	degree	170.0								170.0							
b) Acute Angle (Degree)	degree	83.0								83.0							
b) View Angle Correction, VAC	dB(A)	-0.04								-0.04							
c) Conversion to L _{Aeq(30min)} , CL	dB(A)	-32.6								-32.6							
d) façade correction	dB(A)	3.0								3.0							
Correction e) to f)																	
e) Distance Between Measurment Point to Track	m	25.0								30.5							
e) Horizontal Distance to Track	m	R1 (4/F)	R2 (4/F)	R3 (4/F)	R4 (4/F)	R5 (4/F)	R6 (4/F)	R7 (4/F)	R8 (4/F)	R1 (4/F)	R2 (4/F)	R3 (4/F)	R4 (4/F)	R5 (4/F)	R6 (4/F)	R7 (4/F)	R8 (4/F)
e) Vertical Distance to Track	m	214.6	216.3	220.2	223.6	225.3	227.9	227.9	232.2	219.3	221.6	225.1	227.4	230.2	232.7	233.3	236.9
e) Slant Distance to Track	m	214.6	216.3	220.2	223.6	225.3	227.9	227.9	232.2	219.3	221.6	225.1	227.4	230.2	232.7	233.3	236.9
e) Distance Correction, DC	dB(A)	-9.3	-9.4	-9.4	-9.5	-9.5	-9.6	-9.6	-9.7	-8.6	-8.6	-8.7	-8.7	-8.8	-8.8	-8.8	-8.9
f) Angle of View at NSR	degree	18.0	18.0	18.0	18.0	17.0	17.0	15.0	9.0	18.0	18.0	18.0	18.0	17.0	17.0	15.0	9.0
f) Acute Angle	degree	49.0	48.0	48.0	47.0	46.5	45.5	42.5	39.5	49.0	48.0	48.0	47.0	46.5	45.5	42.5	39.5
f) View Angle Correction, VAC	dB(A)	-9.5	-9.6	-9.6	-9.7	-10.1	-10.2	-11.2	-14.0	-9.5	-9.6	-9.6	-9.7	-10.1	-10.2	-11.2	-14.0
g) Current Max Train Speed of track	km/h	60.0								60.0							
g) Assumed future Max Train Speed of track	km/h	60.0								60.0							
g) Train Speed Correction (TEC)	dB(A)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
h) Maintenance Factor (MFC)	dB(A)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Predicted Noise Level (Leq, 30mins), PNL	dB(A)	35.0	34.9	34.8	34.6	34.2	34.0	33.0	30.2	34.0	33.8	33.7	33.5	33.2	33.0	32.0	29.2

Table 2.5 - Calculation of Predicted Noise Level (Segment 5)

Railway Noise Impact Assessment													
		Near Track (To Fung Tei Station)						Far Track (To Siu Hong Station)					
Average Sound Exposure Level, SEL	dB(A)	73.4						71.6					
Correction a) to d)													
a) Train Frequency (Q) in 30 min.		5.0						5.0					
a) Train Frequency Correction, TFC	dB(A)	7.0						7.0					
b) Angle of View at Measurement Point	degree	170.0						170.0					
b) Acute Angle (Degree)	degree	83.0						83.0					
b) View Angle Correction, VAC	dB(A)	-0.04						-0.04					
c) Conversion to L _{Aeq(30min)} , CL	dB(A)	-32.6						-32.6					
d) facade correction	dB(A)	3.0						3.0					
Correction e) to f)													
e) Distance Between Measurment Point to Track	m	25.0						30.5					
		R1 (4/F)	R2 (4/F)	R3 (4/F)	R4 (4/F)	R5 (4/F)	R6 (4/F)	R1 (4/F)	R2 (4/F)	R3 (4/F)	R4 (4/F)	R5 (4/F)	R6 (4/F)
e) Horizontal Distance to Track	m	205.6	208.5	208.6	210.3	212.5	216.9	210.8	212.4	212.4	214.2	216.6	220.2
e) Vertical Distance to Track	m	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
e) Slant Distance to Track	m	205.6	208.5	208.6	210.3	212.5	216.9	210.8	212.4	212.4	214.2	216.6	220.2
e) Distance Correction, DC	dB(A)	-9.2	-9.2	-9.2	-9.2	-9.3	-9.4	-8.4	-8.4	-8.4	-8.5	-8.5	-8.6
f) Angle of View at NSR	degree	16.0	16.0	13.0	9.0	5.0	1.0	16.0	16.0	13.0	9.0	5.0	1.0
f) Acute Angle	degree	65.0	66.0	62.5	59.5	56.5	54.5	65.0	66.0	62.5	59.5	56.5	54.5
f) View Angle Correction, VAC	dB(A)	-8.4	-8.3	-9.5	-11.3	-14.2	-21.4	-8.4	-8.3	-9.5	-11.3	-14.2	-21.4
g) Current Max Train Speed of track	km/h	60.0						60.0					
g) Assumed future Max Train Speed of track	km/h	60.0						60.0					
g) Train Speed Correction (TFC)	dB(A)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
h) Maintenance Factor (MFC)	dB(A)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Predicted Noise Level (Leq, 30mins), PNL	dB(A)	36.3	36.3	35.1	33.3	30.4	23.1	35.2	35.2	34.1	32.2	29.3	22.1

Table 2.6 - Calculation of Predicted Noise Level (Segment 6)

Railway Noise Impact Assessment					
		Near Track (To Fung Tei Station)		Far Track (To Siu Hong Station)	
Average Sound Exposure Level, SEL	dB(A)	73.4		71.6	
Correction a) to d)					
a) Train Frequency (Q) in 30 min.		5.0		5.0	
a) Train Frequency Correction, TFC	dB(A)	7.0		7.0	
b) Angle of View at Measurement Point	degree	170.0		170.0	
b) Acute Angle (Degree)	degree	83.0		83.0	
b) View Angle Correction, VAC	dB(A)	-0.04		-0.04	
c) Conversion to L _{Aeq(30min)} , CL	dB(A)	-32.6		-32.6	
d) facade correction	dB(A)	3.0		3.0	
Correction e) to f)					
e) Distance Between Measurment Point to Track	m	25.0		30.5	
		R1 (4/F)	R2 (4/F)	R1 (4/F)	R2 (4/F)
e) Horizontal Distance to Track	m	214.4	214.3	218.8	218.3
e) Vertical Distance to Track	m	1.9	1.9	1.9	1.9
e) Slant Distance to Track	m	214.4	214.3	218.8	218.3
e) Distance Correction, DC	dB(A)	-9.3	-9.3	-8.6	-8.5
f) Angle of View at NSR	degree	6.0	2.0	6.0	2.0
f) Acute Angle	degree	77.0	74.0	77.0	74.0
f) View Angle Correction, VAC	dB(A)	-12.0	-16.9	-12.0	-16.9
g) Current Max Train Speed of track	km/h	60.0		60.0	
g) Assumed future Max Train Speed of track	km/h	60.0		60.0	
g) Train Speed Correction (TFC)	dB(A)	0.0	0.0	0.0	0.0
h) Maintenance Factor (MFC)	dB(A)	3.0	3.0	3.0	3.0
Predicted Noise Level (Leq, 30mins), PNL	dB(A)	32.5	27.6	31.4	26.6

Table 3.1 Summary of Predicted Rail Noise

			Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Total Predicted Noise Level (Leq, 30mins), PNL	Overall Predicted Noise Level (Leq, 30mins), PNL
Predicted Noise Level (Leq, 30mins), PLN	R1	Near Track	-	24.4	31.6	35.0	36.3	32.5	40.4	42.9
		Far Track	-	23.4	30.6	34.0	35.2	31.4	39.3	
	R2	Near Track	-	24.4	31.6	34.9	36.3	27.6	39.8	42.3
		Far Track	-	23.3	30.5	33.8	35.2	26.6	38.8	
	R3	Near Track	-	23.7	30.9	34.8	35.1	-	38.9	41.4
		Far Track	-	22.6	29.8	33.7	34.1	-	37.8	
	R4	Near Track	-	22.9	30.8	34.6	33.3	-	38.1	40.6
		Far Track	-	21.9	29.8	33.5	32.2	-	37.0	
	R5	Near Track	-	22.9	30.7	34.2	30.4	-	37.1	39.6
		Far Track	-	21.9	29.7	33.2	29.3	-	36.0	
	R6	Near Track	-	22.8	30.4	34.0	23.1	-	36.1	38.6
		Far Track	-	21.8	29.4	33.0	22.1	-	35.0	
	R7	Near Track	-	22.8	30.0	33.0	-	-	35.0	37.6
		Far Track	-	21.7	29.0	32.0	-	-	34.0	
	R8	Near Track	-	22.0	29.9	30.2	-	-	33.4	35.9
		Far Track	-	21.0	28.9	29.2	-	-	32.4	
	R9	Near Track	36.0	30.8	-	-	-	-	37.1	39.6
		Far Track	34.9	29.7	-	-	-	-	36.1	
	R10	Near Track	35.9	30.8	21.9	-	-	-	37.2	39.7
		Far Track	34.9	29.7	20.9	-	-	-	36.2	
	R11	Near Track	35.7	30.7	23.4	-	-	-	37.1	39.6
		Far Track	34.7	29.6	22.3	-	-	-	36.1	
	R12	Near Track	35.7	30.0	22.9	-	-	-	36.9	39.4
		Far Track	34.7	28.9	21.8	-	-	-	35.9	
	R13	Near Track	35.3	29.9	22.9	-	-	-	36.6	39.1
		Far Track	34.2	28.9	21.9	-	-	-	35.5	
	R14	Near Track	35.2	29.8	22.9	-	-	-	36.5	39.0
		Far Track	34.2	28.8	21.9	-	-	-	35.5	

Appendix C10

Noise Measurement Details of Existing Fixed Noise Sources

Measurement Results of Fixed Noise Source

Equipment Used (Model and Serial No.)	Noise Meter: XL2-A2A-22051-F0 Calibrator: CEL-120/1 4884880
Weather Condition	Sunny
Noise Descriptors	LAeq 30 minutes
Measurement Method	Direct measurement
Microphone Position	Free-field measurement

	Daytime	Evening time	Night time
F1 Tuen Mun North Offtake and Pigging Station			
Measurement Date and Time	11/12/2025 10:47 – 11:47	11/12/2025 20:08 - 20:38	11/12/2025 02:30-03:00
Measured LAeq 30 minutes, dB(A) ⁽¹⁾	75.1	75.0	68.3

	Daytime	Evening time	Night time
F2 Tuen Mun Water Treatment Works			
Measurement Date and Time	11/12/2025 12:22 - 12:52	11/12/2025 21:44-22:14	11/12/2025 01:36-02:06
Measured LAeq 30 minutes, dB(A) ⁽¹⁾	61.8	59.8	53.2

Note: (1) +3dB(A) for façade correction has been applied.

Appendix C11

Existing Fixed Noise Equipment Reference

Engineering Data

Design Manual

RXYQ-XATJA, 208/230 V

RXYQ-XAYDA, 460 V

Heat Pump 60 Hz

R-410A



VRV

7. Specifications

Model name			RXYQ72XATJA	RXYQ96XATJA	RXYQ120XATJA
Power supply			3 phase, 60 Hz, 208/230 V	3 phase, 60 Hz, 208/230 V	3 phase, 60 Hz, 208/230 V
★1 Cooling capacity	Nominal	Btu/h	72,000 (21.1)	96,000 (28.1)	120,000 (35.2)
	Rated	(kW)	69,000 (20.2)	92,000 (27.0)	114,000 (33.4)
★2 Heating capacity	Nominal	Btu/h	81,000 (23.7)	108,000 (31.7)	135,000 (39.6)
	Rated	(kW)	73,000 (21.4)	103,000 (30.2)	129,000 (37.8)
Casing color			Ivory white (5Y7.5/1)	Ivory white (5Y7.5/1)	Ivory white (5Y7.5/1)
Dimensions: (H × W × D)		in. (mm)	66-11/16 × 36-11/16 × 30-3/16 (1694 × 932 × 767)	66-11/16 × 48-7/8 × 30-3/16 (1694 × 1242 × 767)	66-11/16 × 48-7/8 × 30-3/16 (1694 × 1242 × 767)
Heat exchanger			Cross fin coil	Cross fin coil	Cross fin coil
Compressor	Type		Hermetrically sealed scroll type	Hermetrically sealed scroll type	Hermetrically sealed scroll type
	Displacement	m³/h	14.7	19.3	26.6
	Number of revolutions	r/min	6,954	6,072	8,346
	Motor output × Number of units	kW	4.2 × 1	6.3 × 1	8.7 × 1
	Starting method		Soft start	Soft start	Soft start
Fan	Type		Propeller fan	Propeller fan	Propeller fan
	Motor output	kW	0.75 × 1	0.35 × 2	0.35 × 2
	Airflow rate	cfm. (m³/min)	5,544 (157)	5,827 (165)	6,286 (178)
	Drive		Direct drive	Direct drive	Direct drive
Connecting pipes	Liquid pipe	in. (mm)	φ3/8 (9.5) C1220T (Brazing connection)	φ3/8 (9.5) C1220T (Brazing connection)	φ1/2 (12.7) C1220T (Brazing connection)
	Gas pipe	in. (mm)	φ3/4 (19.1) C1220T (Brazing connection)	φ7/8 (22.2) C1220T (Brazing connection)	φ1-1/8 (28.6) C1220T (Brazing connection)
Weight		lbs (kg)	435 (198)	525 (238)	528 (239)
Sound pressure level (Reference data)		dB(A)	58	61	61
Sound power level (Reference data)		dB	78	81	81
Safety devices			High pressure switch, Fan driver overload protector, Overcurrent relay, Inverter overload protector	High pressure switch, Fan driver overload protector, Overcurrent relay, Inverter overload protector	High pressure switch, Fan driver overload protector, Overcurrent relay, Inverter overload protector
Defrost method			Deicer	Deicer	Deicer
Capacity control		%	20 - 100	16 - 100	15 - 100
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Charge	lbs (kg)	13.0 (5.9)	22.7 (10.3)	22.9 (10.4)
	Control		Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
Standard accessories			Installation manual, Operation manual, Connection pipes, Clamps	Installation manual, Operation manual, Connection pipes, Clamps	Installation manual, Operation manual, Connection pipes, Clamps

Note:

- ★1. Indoor temp.: 80°FDB (26.7°CDB), 67°FWB (19.4°CWB) / Outdoor temp.: 95°FDB (35.0°CDB) / Rated capacity is certified under AHRI standard 1230.
- ★2. Indoor temp.: 70°FDB (21.1°CDB) / Outdoor temp.: 47°FDB (8.3°CDB), 43°FWB (6.1°CWB) / Rated capacity is certified under AHRI standard 1230.

3D122720

Appendix III

Typical Sound Power Levels of Electrical & Mechanical Equipment

The following sound power levels for various rating of equipment are given for reference purpose only (See *Table 11* to *Table 14*). Where practicable, the sound power level of the concerned equipment should be referred to the respective manufacturers. Super low noise model of Electrical & Mechanical Systems on the market could be 6 to 9 dB(A) lower.

Table 11 : Typical Sound Power Levels of Air-cooled Chillers

Cooling Capacity (Ton)	Sound Power Level (dB(A))
50	100
100	102
150	103
200	105
250	106
300	106
350	107
400	109

Table 12 : Typical Sound Power Levels of Water Cooling Towers

Horsepower of Fan (hp)	Sound Power Level (dB(A))
10	96
20	99
30	101
40	102
50	103
60	104
70	105
80	105

Appendix C12

Detailed Calculation of Existing Fixed Noise Sources

Proposed Land Exchange For Social Welfare Facilities and Public Carpark at Lot 496 S.C in D.D. 132 and the Adjoining Government Land

Estimation of the Sound Power Level

Noise Source ID	Location	Fixed Noise Source	Quantity	Referenced SPL/Measured SPL		Directivity Factor Q	Measured Height	Shortest Separation Distance from Source to Measurement Point, m	Slang Distance	Estimated SWL/Referenced SWL	
				dB(A)			m	m	m	dB(A)	
				Day Time	Night Time					Day Time	Night Time
FS1 - FS5	Fu Tei Fire Station	VRV ^[1]	5	-	-	-	-	-	-	78	78
PS1 - PS14	Tuen Mun Government Primary School	VRV ^[1]	14	-	-	-	-	-	-	78	78
LU1 - LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller ^[2]	2	-	-	-	-	-	-	109	109
OP1	Tuen Mun North Offtake and Pigging Station	Offtake and Pigging Station Equipment	-	72.1	65.3	2	1.2	6	6.1	96	89
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	58.8	50.2	2	1.2	62	62.0	103	94

Remarks:

[1] The SWL of the VRV unit is referenced from the Daikin VRV mode RXYQ72XATJA catalogue.

[2] The SWL of the air-cooled chiller is referenced from Table 11 of “*Good Practices on the Control of Noise from Electrical & Mechanical Systems*” published by the EPD. To represent the worst-case scenario, the cooling capacity of the air-cooled chiller is assumed to be 400 tons.

Fixed Noise Assessment

NSR ID	N1
NSR Floor	7/F
NSR Height (mPD)	28.32

Noise Source ID	Location	Equipment	Quantity	Operation		Estimated SWL, dB(A)		Horizontal Distance from Source to NSRs, m	Height of the Equipment, m	Vertical Distance from Source to NSRs, m	Shortest slant Distance from	Correction			Predicted Daytime SPL at NSR, dB(a)	Predicted Nighttime SPL at NSR, dB(a)	Direct Line of Sight (Y/N)
				Daytime	Nighttime	Daytime	Nighttime					Distance	Fa�ade	Tonality			
FS1	Fu Tei Fire Station	VRV	1	Y	Y	78	78	147.5	23.6	4.7	147.6	51.4	3	3	33	33	Y
FS2	Fu Tei Fire Station	VRV	1	Y	Y	78	78	144.3	23.6	4.7	144.4	51.2	3	3	33	33	Y
FS3	Fu Tei Fire Station	VRV	1	Y	Y	78	78	142.7	23.6	4.7	142.8	51.1	3	3	33	33	Y
FS4	Fu Tei Fire Station	VRV	1	Y	Y	78	78	138.8	23.6	4.7	138.9	50.9	3	3	33	33	Y
FS5	Fu Tei Fire Station	VRV	1	Y	Y	78	78	136.2	23.6	4.7	136.3	50.7	3	3	33	33	Y
PS1	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	266.9	17.0	11.3	267.1	56.5	3	3	27	-	Y
PS2	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	267.5	17.0	11.3	267.7	56.6	3	3	27	-	Y
PS3	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	268.2	17.0	11.3	268.4	56.6	3	3	27	-	Y
PS4	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	268.9	17.0	11.3	269.1	56.6	3	3	27	-	Y
PS5	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	269.4	17.0	11.3	269.6	56.6	3	3	27	-	Y
PS6	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	270.0	17.0	11.3	270.2	56.6	3	3	27	-	Y
PS7	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	268.7	17.0	11.3	268.9	56.6	3	3	27	-	Y
PS8	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	267.3	17.0	11.3	267.5	56.5	3	3	27	-	Y
PS9	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	266.0	17.0	11.3	266.2	56.5	3	3	27	-	Y
PS10	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	264.7	17.0	11.3	264.9	56.5	3	3	28	-	Y
PS11	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	269.3	17.0	11.3	269.5	56.6	3	3	27	-	Y
PS12	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	268.0	17.0	11.3	268.2	56.6	3	3	27	-	Y
PS13	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	266.7	17.0	11.3	266.9	56.5	3	3	27	-	Y
PS14	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	265.3	17.0	11.3	265.5	56.5	3	3	28	-	Y
LU1	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	-	-	-	-	-	-	-	-	-	N
LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	-	-	-	-	-	-	-	-	-	N
OP1	Tuen Mun North Offtake and Pigeing Station	Offtake and Pigeing Station Equipment	-	Y	Y	96	89	-	-	-	-	-	-	-	-	-	N
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	Y	Y	103	94	-	-	-	-	-	-	-	-	-	N
												Total Predicted Noise Level, dB(A)			42	40	
												Acceptable Noise Level, dB(A)			65	55	

Fixed Noise Assessment

NSR ID	N3
NSR Floor	2/F
NSR Height (mPD)	12.57

Noise Source ID	Location	Equipment	Quantity	Operation		Estimated SWL, dB(A)		Horizontal Distance from Source to NSRs, m	Height of the Equipment, m	Vertical Distance from Source to NSRs, m	Shortest slang Distance from	Correction			Predicted Daytime SPL at NSR, dB(a)	Predicted Nighttime SPL at NSR, dB(a)	Direct Line of Sight (Y/N)
				Daytime	Nighttime	Daytime	Nighttime					Distance	FaÇade	Tonality			
FS1	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS2	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS3	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS4	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS5	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
PS1	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS2	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS3	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS4	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS5	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS6	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS7	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS8	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS9	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS10	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS11	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS12	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS13	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
PS14	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N
LU1	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	-	-	-	-	-	-	-	-	-	N
LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	-	-	-	-	-	-	-	-	-	N
OP1	Tuen Mun North Offtake and Piggine Station	Offtake and Piggine Station Equipment	-	Y	Y	96	89	46.1	7.4	5.2	46.4	41.3	3	3	60	54	Y
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	Y	Y	103	94	183.5	10.6	2.0	183.5	53.3	3	3	55	47	Y
												Total Predicted Noise Level, dB(A)			62	54	
												Acceptable Noise Level, dB(A)			65	55	

Fixed Noise Assessment

NSR ID	N3
NSR Floor	3/F
NSR Height (mPD)	15.72

Noise Source ID	Location	Equipment	Quantity	Operation		Estimated SWL, dB(A)		Horizontal Distance from Source to NSRs, m	Height of the Equipment, m	Vertical Distance from Source to NSRs, m	Shortest slang Distance from	Correction			Predicted Daytime SPL at NSR, dB(a)	Predicted Nighttime SPL at NSR, dB(a)	Direct Line of Sight (Y/N)		
				Daytime	Nighttime	Daytime	Nighttime					Distance	FaÇade	Tonality					
FS1	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS2	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS3	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS4	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS5	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
PS1	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS2	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS3	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS4	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS5	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS6	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS7	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS8	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS9	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS10	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS11	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS12	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS13	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS14	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
LU1	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	267.1	14.8	0.9	267.1	56.5	3	3	58	-	Y		
LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	274.9	14.8	0.9	274.9	56.8	3	3	58	-	Y		
OP1	Tuen Mun North Offtake and Piggine Station	Offtake and Piggine Station Equipment	-	Y	Y	96	89	46.1	7.4	8.4	46.9	41.4	3	3	60	54	Y		
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	Y	Y	103	94	183.5	10.6	5.2	183.6	53.3	3	3	55	47	Y		
												Total Predicted Noise Level, dB(A)			64		54		
												Acceptable Noise Level, dB(A)			65		55		

Fixed Noise Assessment

NSR ID	N3
NSR Floor	7/F
NSR Height (mPD)	28.32

Noise Source ID	Location	Equipment	Quantity	Operation		Estimated SWL, dB(A)		Horizontal Distance from Source to NSRs, m	Height of the Equipment, m	Vertical Distance from Source to NSRs, m	Shortest slang Distance from	Correction			Predicted Daytime SPL at NSR, dB(a)	Predicted Nighttime SPL at NSR, dB(a)	Direct Line of Sight (Y/N)
				Daytime	Nighttime	Daytime	Nighttime					Distance	FaÇade	Tonality			
FS1	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS2	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS3	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS4	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS5	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
PS1	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	254.8	17.0	11.3	255.1	56.1	3	3	28	-	Y
PS2	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	255.5	17.0	11.3	255.8	56.2	3	3	28	-	Y
PS3	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	255.9	17.0	11.3	256.2	56.2	3	3	28	-	Y
PS4	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	256.5	17.0	11.3	256.7	56.2	3	3	28	-	Y
PS5	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	256.9	17.0	11.3	257.1	56.2	3	3	28	-	Y
PS6	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	257.4	17.0	11.3	257.6	56.2	3	3	28	-	Y
PS7	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	255.8	17.0	11.3	256.1	56.2	3	3	28	-	Y
PS8	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	254.5	17.0	11.3	254.8	56.1	3	3	28	-	Y
PS9	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	253.1	17.0	11.3	253.4	56.1	3	3	28	-	Y
PS10	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	251.6	17.0	11.3	251.9	56.0	3	3	28	-	Y
PS11	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	256.4	17.0	11.3	256.6	56.2	3	3	28	-	Y
PS12	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	255.1	17.0	11.3	255.4	56.1	3	3	28	-	Y
PS13	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	253.6	17.0	11.3	253.9	56.1	3	3	28	-	Y
PS14	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	252.2	17.0	11.3	252.5	56.0	3	3	28	-	Y
LU1	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	267.1	14.8	13.5	267.4	56.5	3	3	58	-	Y
LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	274.9	14.8	13.5	275.2	56.8	3	3	58	-	Y
OP1	Tuen Mun North Offtake and Piggine Station	Offtake and Piggine Station Equipment	-	Y	Y	96	89	46.1	7.37	21.0	50.6	42.1	3	3	60	53	Y
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	Y	Y	103	94	183.5	10.57	17.8	184.4	53.3	3	3	55	47	Y
												Total Predicted Noise Level, dB(A)			64	54	
												Acceptable Noise Level, dB(A)			65	55	

Fixed Noise Assessment

NSR ID	N4
NSR Floor	2/F
NSR Height (mPD)	12.57

Noise Source ID	Location	Equipment	Quantity	Operation		Estimated SWL, dB(A)		Horizontal Distance from Source to NSRs, m	Height of the Equipment, m	Vertical Distance from Source to NSRs, m	Shortest slang Distance from	Correction			Predicted Daytime SPL at NSR, dB(a)	Predicted Nighttime SPL at NSR, dB(a)	Direct Line of Sight (Y/N)		
				Daytime	Nighttime	Daytime	Nighttime					Distance	FaÇade	Tonality					
FS1	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS2	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS3	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS4	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS5	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
PS1	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS2	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS3	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS4	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS5	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS6	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS7	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS8	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS9	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS10	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS11	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS12	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS13	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS14	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
LU1	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	-	-	-	-	-	-	-	-	-	N		
LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	-	-	-	-	-	-	-	-	-	N		
OP1	Tuen Mun North Offtake and Piggine Station	Offtake and Piggine Station Equipment	-	Y	Y	96	89	71.3	7.37	5.2	71.5	45.1	3	3	57	50	Y		
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	Y	Y	103	94	156.2	10.57	2.0	156.2	51.9	3	3	57	48	Y		
												Total Predicted Noise Level, dB(A)			60		52		
												Acceptable Noise Level, dB(A)			65		55		

Fixed Noise Assessment

NSR ID	N4
NSR Floor	3/F
NSR Height (mPD)	15.72

Noise Source ID	Location	Equipment	Quantity	Operation		Estimated SWL, dB(A)		Horizontal Distance from Source to NSRs, m	Height of the Equipment, m	Vertical Distance from Source to NSRs, m	Shortest slang Distance from	Correction			Predicted Daytime SPL at NSR, dB(a)	Predicted Nighttime SPL at NSR, dB(a)	Direct Line of Sight (Y/N)		
				Daytime	Nighttime	Daytime	Nighttime					Distance	FaÇade	Tonality					
FS1	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS2	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS3	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS4	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS5	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
PS1	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS2	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS3	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS4	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS5	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS6	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS7	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS8	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS9	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS10	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS11	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS12	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS13	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS14	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
LU1	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	238.0	14.8	0.9	238.0	55.5	3	3	59	-	Y		
LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	245.9	14.8	0.9	245.9	55.8	3	3	59	-	Y		
OP1	Tuen Mun North Offtake and Piggine Station	Offtake and Piggine Station Equipment	-	Y	Y	96	89	71.3	7.4	8.4	71.8	45.1	3	3	57	50	Y		
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	Y	Y	103	94	156.2	10.6	5.2	156.3	51.9	3	3	57	48	Y		
												Total Predicted Noise Level, dB(A)			64		52		
												Acceptable Noise Level, dB(A)			65		55		

Fixed Noise Assessment

NSR ID	N4
NSR Floor	7/F
NSR Height (mPD)	28.32

Noise Source ID	Location	Equipment	Quantity	Operation		Estimated SWL, dB(A)		Horizontal Distance from Source to NSRs, m	Height of the Equipment, m	Vertical Distance from Source to NSRs, m	Shortest slang Distance from	Correction			Predicted Daytime SPL at NSR, dB(a)	Predicted Nighttime SPL at NSR, dB(a)	Direct Line of Sight (Y/N)
				Daytime	Nighttime	Daytime	Nighttime					Distance	FaÇade	Tonality			
FS1	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS2	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS3	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS4	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS5	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
PS1	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	283.9	17.0	11.3	284.1	57.1	3	3	27	-	Y
PS2	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	284.2	17.0	11.3	284.4	57.1	3	3	27	-	Y
PS3	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	284.6	17.0	11.3	284.8	57.1	3	3	27	-	Y
PS4	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	285.4	17.0	11.3	285.6	57.1	3	3	27	-	Y
PS5	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	285.7	17.0	11.3	285.9	57.1	3	3	27	-	Y
PS6	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	286.0	17.0	11.3	286.2	57.1	3	3	27	-	Y
PS7	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	284.4	17.0	11.3	284.6	57.1	3	3	27	-	Y
PS8	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	282.9	17.0	11.3	283.1	57.0	3	3	27	-	Y
PS9	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	281.4	17.0	11.3	281.6	57.0	3	3	27	-	Y
PS10	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	280.0	17.0	11.3	280.2	57.0	3	3	27	-	Y
PS11	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	284.9	17.0	11.3	285.1	57.1	3	3	27	-	Y
PS12	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	283.4	17.0	11.3	283.6	57.1	3	3	27	-	Y
PS13	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	282.2	17.0	11.3	282.4	57.0	3	3	27	-	Y
PS14	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	280.5	17.0	11.3	280.7	57.0	3	3	27	-	Y
LU1	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	238.0	14.8	13.5	238.4	55.5	3	3	59	-	Y
LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	245.9	14.8	13.5	246.3	55.8	3	3	59	-	Y
OP1	Tuen Mun North Offtake and Piggine Station	Offtake and Piggine Station Equipment	-	Y	Y	96	89	71.3	7.37	21.0	74.3	45.4	3	3	56	50	Y
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	Y	Y	103	94	156.2	10.57	17.8	157.2	51.9	3	3	57	48	Y
												Total Predicted Noise Level, dB(A)			64	52	
												Acceptable Noise Level, dB(A)			65	55	

Fixed Noise Assessment

NSR ID	N5
NSR Floor	2/F
NSR Height (mPD)	12.57

Noise Source ID	Location	Equipment	Quantity	Operation		Estimated SWL, dB(A)		Horizontal Distance from Source to NSRs, m	Height of the Equipment, m	Vertical Distance from Source to NSRs, m	Shortest slang Distance from	Correction			Predicted Daytime SPL at NSR, dB(a)	Predicted Nighttime SPL at NSR, dB(a)	Direct Line of Sight (Y/N)		
				Daytime	Nighttime	Daytime	Nighttime					Distance	Façade	Tonality					
FS1	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS2	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS3	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS4	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS5	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
PS1	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS2	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS3	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS4	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS5	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS6	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS7	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS8	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS9	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS10	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS11	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS12	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS13	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS14	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
LU1	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	-	-	-	-	-	-	-	-	-	N		
LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	-	-	-	-	-	-	-	-	-	N		
OP1	Tuen Mun North Offtake and Piggins Station	Offtake and Piggings Station Equipment	-	Y	Y	96	89	98.7	7.4	5.2	98.8	47.9	3	3	54	47	Y		
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	Y	Y	103	94	136.2	10.6	2.0	136.2	50.7	3	3	58	49	Y		
												Total Predicted Noise Level, dB(A)			59		51		
												Acceptable Noise Level, dB(A)			65		55		

Fixed Noise Assessment

NSR ID	N5
NSR Floor	3/F
NSR Height (mPD)	15.72

Noise Source ID	Location	Equipment	Quantity	Operation		Estimated SWL, dB(A)		Horizontal Distance from Source to NSRs, m	Height of the Equipment, m	Vertical Distance from Source to NSRs, m	Shortest slang Distance from	Correction			Predicted Daytime SPL at NSR, dB(a)	Predicted Nighttime SPL at NSR, dB(a)	Direct Line of Sight (Y/N)		
				Daytime	Nighttime	Daytime	Nighttime					Distance	FaÇade	Tonality					
FS1	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS2	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS3	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS4	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
FS5	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N		
PS1	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS2	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS3	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS4	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS5	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS6	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS7	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS8	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS9	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS10	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS11	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS12	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS13	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
PS14	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	-	-	-	-	-	-	-	-	-	N		
LU1	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	208.7	14.8	0.9	208.7	54.4	3	3	61	-	Y		
LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	216.8	14.8	0.9	216.8	54.7	3	3	60	-	Y		
OP1	Tuen Mun North Offtake and Piggine Station	Offtake and Piggine Station Equipment	-	Y	Y	96	89	98.7	7.4	8.4	99.1	47.9	3	3	54	47	Y		
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	Y	Y	103	94	136.2	10.6	5.2	136.3	50.7	3	3	58	49	Y		
												Total Predicted Noise Level, dB(A)			65		51		
												Acceptable Noise Level, dB(A)			65		55		

Fixed Noise Assessment

NSR ID	N5
NSR Floor	7/F
NSR Height (mPD)	28.32

Noise Source ID	Location	Equipment	Quantity	Operation		Estimated SWL, dB(A)		Horizontal Distance from Source to NSRs, m	Height of the Equipment, m	Vertical Distance from Source to NSRs, m	Shortest slang Distance from	Correction			Predicted Daytime SPL at NSR, dB(a)	Predicted Nighttime SPL at NSR, dB(a)	Direct Line of Sight (Y/N)
				Daytime	Nighttime	Daytime	Nighttime					Distance	FaÇade	Tonality			
FS1	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS2	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS3	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS4	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
FS5	Fu Tei Fire Station	VRV	1	Y	Y	78	-	-	-	-	-	-	-	-	-	-	N
PS1	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	312.5	17.0	11.3	312.7	57.9	3	3	26	-	Y
PS2	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	313.0	17.0	11.3	313.2	57.9	3	3	26	-	Y
PS3	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	313.5	17.0	11.3	313.7	57.9	3	3	26	-	Y
PS4	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	314.1	17.0	11.3	314.3	57.9	3	3	26	-	Y
PS5	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	314.4	17.0	11.3	314.6	58.0	3	3	26	-	Y
PS6	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	314.9	17.0	11.3	315.1	58.0	3	3	26	-	Y
PS7	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	312.9	17.0	11.3	313.1	57.9	3	3	26	-	Y
PS8	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	311.5	17.0	11.3	311.7	57.9	3	3	26	-	Y
PS9	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	310.2	17.0	11.3	310.4	57.8	3	3	26	-	Y
PS10	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	308.6	17.0	11.3	308.8	57.8	3	3	26	-	Y
PS11	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	313.4	17.0	11.3	313.6	57.9	3	3	26	-	Y
PS12	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	312.0	17.0	11.3	312.2	57.9	3	3	26	-	Y
PS13	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	310.6	17.0	11.3	310.8	57.8	3	3	26	-	Y
PS14	Tuen Mun Government Primary School	VRV	1	Y	N	78	-	309.3	17.0	11.3	309.5	57.8	3	3	26	-	Y
LU1	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	208.7	14.8	13.5	209.1	54.4	3	3	61	-	Y
LU2	Lingnan University Chan Tak Tai Auditorium	Air-cooled Chiller	1	Y	N	109	-	216.8	14.8	13.5	217.2	54.7	3	3	60	-	Y
OP1	Tuen Mun North Offtake and Piggine Station	Offtake and Piggine Station Equipment	-	Y	Y	96	89	98.7	7.37	21.0	100.9	48.1	3	3	54	47	Y
TW1	Tuen Mun Treatment Works	Tuen Mun Treatment Works Equipment	-	Y	Y	103	94	136.2	10.57	17.8	137.4	50.8	3	3	58	49	Y
												Total Predicted Noise Level, dB(A)			65	51	
												Acceptable Noise Level, dB(A)			65	55	

Appendix C13

Calibration Certificate of Noise Meter

Certificate of Calibration

Certificate No. ATS25-014-CC010

Customer: **Urban Green Consultants Limited**
23/F., Wui Tat Centre,
55 Connaught Road West,
Sheung Wan, Hong Kong

Unit-under-test (UUT):

Description: Acoustic Calibrator
Manufacturer: Casella
Type No.: CEL-120/1
Serial No.: 4884880

Conditions during calibration:

Temperature: 26°C
Relative Humidity: 56%

Test Specifications: Calibration Check

Date of calibration: 04 June 2025

Test Results: All calibration points are within manufacturer's specification.

Certified by:


Mr. Ching Mau LAM / Quality Manager
MIOA, MHKIOA



Issue Date: 09 June 2025

1. The instrument under test was allowed to stabilize in the laboratory for over 24 hours.
2. Calibration equipment:

Description:	Sound Analyzer	Reference Microphone
Manufacturer:	Brüel & Kjær	Brüel & Kjær
Type No.:	2270	4189
Serial No.:	3001883	2662797
Last Calibration Date:	11 March 2025	11 March 2025
Certificate No.:	AV250047	AV250047

The calibration equipment used for calibration is traceable to National Standards via Standards and Calibration Laboratory, the Government of the HKSAR.

3. The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted, if any, will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. Acoustic Testing Services Limited shall not be liable for any loss or damage resulting from the use of the equipment.
4. Calibration Results

Nominal value dB	Measured value dB	IEC 60942 Class 1 Tolerance Limits dB	Conclusion	Expanded Measurement Uncertainty of Reference Microphone B&K 4189 at 1000 Hz dB
94.00	94.18	± 0.25	PASS	0.20
114.0	114.20	± 0.25	PASS	0.20

All calibration points are within manufacturer's specification.

Certificate of Calibration

Certificate No. ATS25-014-CC009

Customer: **Urban Green Consultants Limited**

23/F., Wui Tat Centre,
55 Connaught Road West,
Sheung Wan, Hong Kong

Unit-under-test (UUT):

Description:	Sound Analyzer	,	Microphone	,	Pre-amplifier
Manufacturer:	NTi Audio	,	ACO Pacific	,	NTi Audio
Type No.:	XL2	,	7052	,	MA220
Serial No.:	A2A-22051-F0	,	73809	,	8057

Conditions during calibration:

Temperature: 26°C

Relative Humidity: 56%

Test Specifications: Calibration Check

Date of calibration: 04 June 2025

Test Results: All calibration points are within manufacturer's specification.

Certified by:



Mr. Ching Mau LAM / Quality Manager
MIOA, MHKIOA

Issue Date: 09 June 2025

1. The instrument under test was allowed to stabilize in the laboratory for over 24 hours.

2. Calibration equipment:

Description: Multifunction Acoustical Calibrator
Manufacturer & Type: Brüel & Kjær 4226
Serial No.: 2919264
Last Calibration Date: 11 September 2024
Certificate No.: 2GB24018355-0001

The calibration equipment used for calibration is traceable to National Standards via China Ceprei Laboratory Calibration & Testing Centre. The Multifunction Acoustical Calibrator Brüel & Kjær 4226 has been accredited calibrated by other laboratory and it is found that it cannot fulfill the tolerance limits for frequency at 2000 Hz only, since the Brüel & Kjær 4226 is designed for old year version of IEC 60942 (or JJG 176), but the tolerance limits for frequency as well as sound pressure level, are updated in the most updated version of standards. However, it can still fulfill the requirements for sound pressure level from 31.5 Hz to 8000 Hz.

3. The sensitivity of the microphone has been recorded before the calibration.

Recorded Microphone Sensitivity (mV/Pa)	21.3
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4. The Sound Analyzer has been calibrated in accordance with the requirements as specified in IEC 61672-1 Class 1, and vendor specific procedures.

5. The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted, if any, will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. Acoustic Testing Services Limited shall not be liable for any loss or damage resulting from the use of the equipment.

6. Calibration Results

6.1 Sound Pressure Level

Reference Sound Pressure Level

Setting of unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672-1 Class 1 Tolerance Limits, dB	Conclusion
Range, dB	Parameter	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA SPL	Fast	94.0	1000	94.0	± 0.7	PASS

Linearity

Setting of unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672-1 Class 1 Tolerance Limits, dB	Conclusion
Range, dB	Parameter	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA SPL	Fast	94.0	1000	94.0	± 0.7	PASS
			104.0		103.9	± 0.7	PASS
			114.0		113.9	± 0.7	PASS

Time Weighting

Setting of unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672-1 Class 1 Tolerance Limits, dB	Conclusion
Range, dB	Parameter	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA SPL	Fast	94.0	1000	94.0	± 0.7	PASS
		Slow			93.9	± 0.7	PASS

6.2 Frequency Response

A-weighting:

Setting of unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672-1 Class 1 Tolerance Limits, dB	Conclusion
Range, dB	Parameter	Time Weighting	Level, dB	Frequency, Hz			
30-130	SPL	Fast	54.6	31.5	54.5	± 1.5	PASS
			67.8	63	67.7	± 1.0	PASS
			77.9	125	77.8	± 1.0	PASS
			85.4	250	85.3	± 1.0	PASS
			90.8	500	90.6	± 1.0	PASS
			94.0	1000	93.9	± 0.7	PASS
			95.2	2000	95.0	± 1.0	PASS
			95.0	4000	94.6	± 1.0	PASS
			92.9	8000	91.1	+1.5; -2.5	PASS

C-weighting:

Setting of unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672-1 Class 1 Tolerance Limits, dB	Conclusion
Range, dB	Parameter	Time Weighting	Level, dB	Frequency, Hz			
30-130	SPL	Fast	91.0	31.5	90.9	± 1.5	PASS
			93.2	63	93.1	± 1.0	PASS
			93.8	125	93.7	± 1.0	PASS
			94.0	250	93.9	± 1.0	PASS
			94.0	500	93.9	± 1.0	PASS
			94.0	1000	93.9	± 0.7	PASS
			93.8	2000	93.6	± 1.0	PASS
			93.2	4000	92.8	± 1.0	PASS
			91.0	8000	89.2	+1.5; -2.5	PASS

Linear:

Setting of unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672-1 Class 1 Tolerance Limits, dB	Conclusion
Range, dB	Parameter	Time Weighting	Level, dB	Frequency, Hz			
30-130	SPL	Fast	94.0	31.5	93.9	± 1.5	PASS
				63	93.9	± 1.0	PASS
				125	93.9	± 1.0	PASS
				250	93.9	± 1.0	PASS
				500	93.9	± 1.0	PASS
				1000	93.9	± 0.7	PASS
				2000	93.8	± 1.0	PASS
				4000	93.6	± 1.0	PASS
				8000	92.2	+1.5; -2.5	PASS

All calibration points are within manufacturer's specification.

Appendix D1

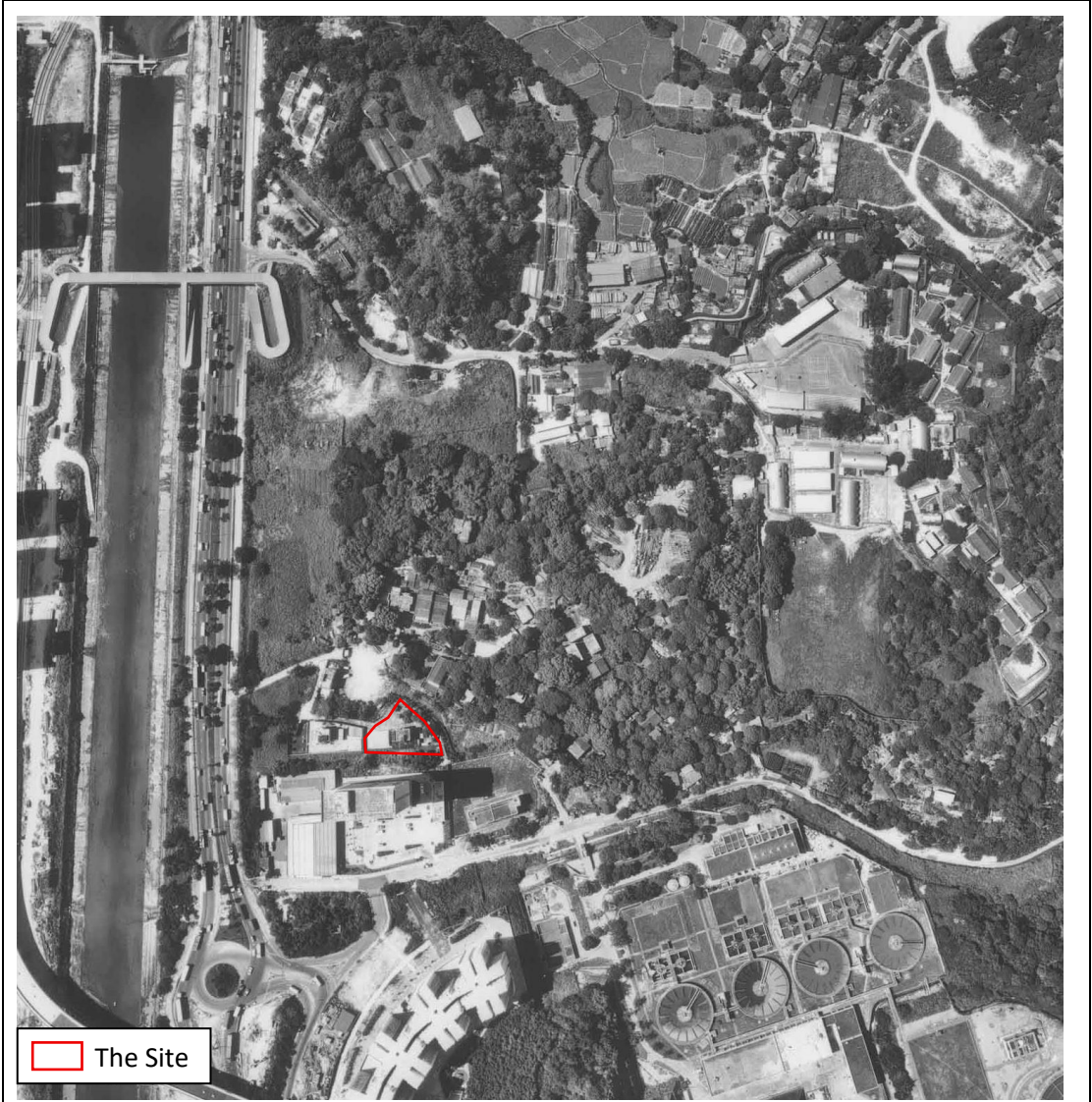
Historic Aerial Photograph



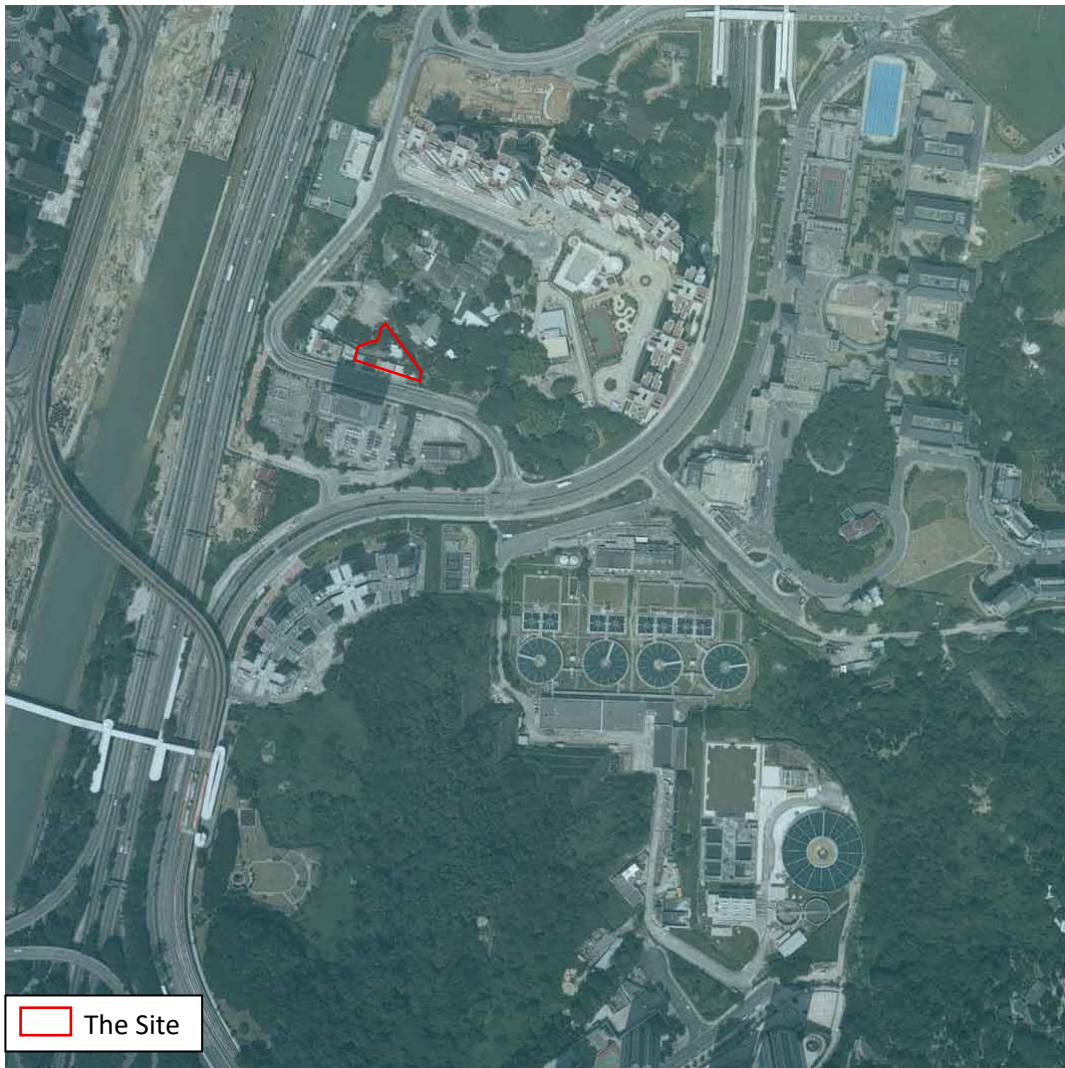
Year	Ref. No.	Observation
1974	10320	The Site was a farmland.



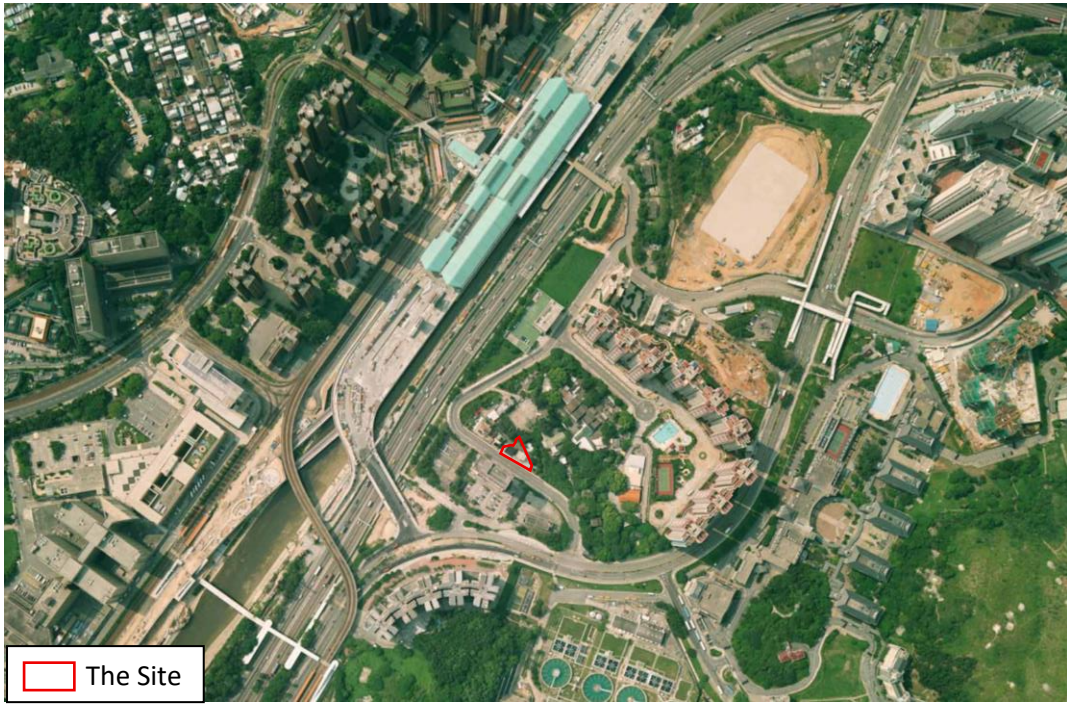
Year	Ref. No.	Observation
1983	50907	The Site was occupied by a village house with hard paving.



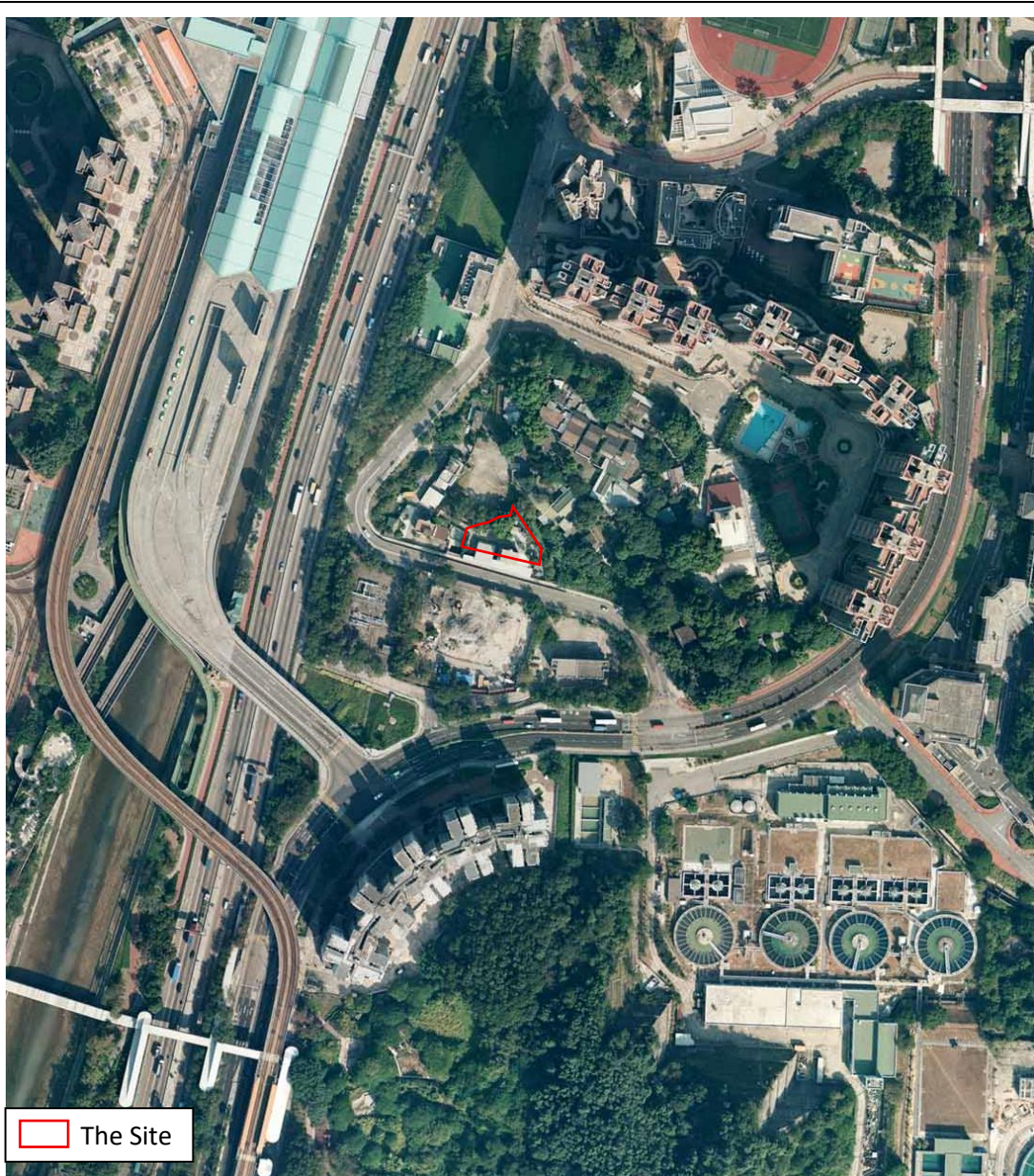
Year	Ref. No.	Observation
1990	A21462	The Site was occupied by a village house with hard paving.



Year	Ref. No.	Observation
2000	CN28337	The Site was occupied by a village house with hard paving.



Year	Ref. No.	Observation
2003	CW48240	The Site was occupied as a place of worship.

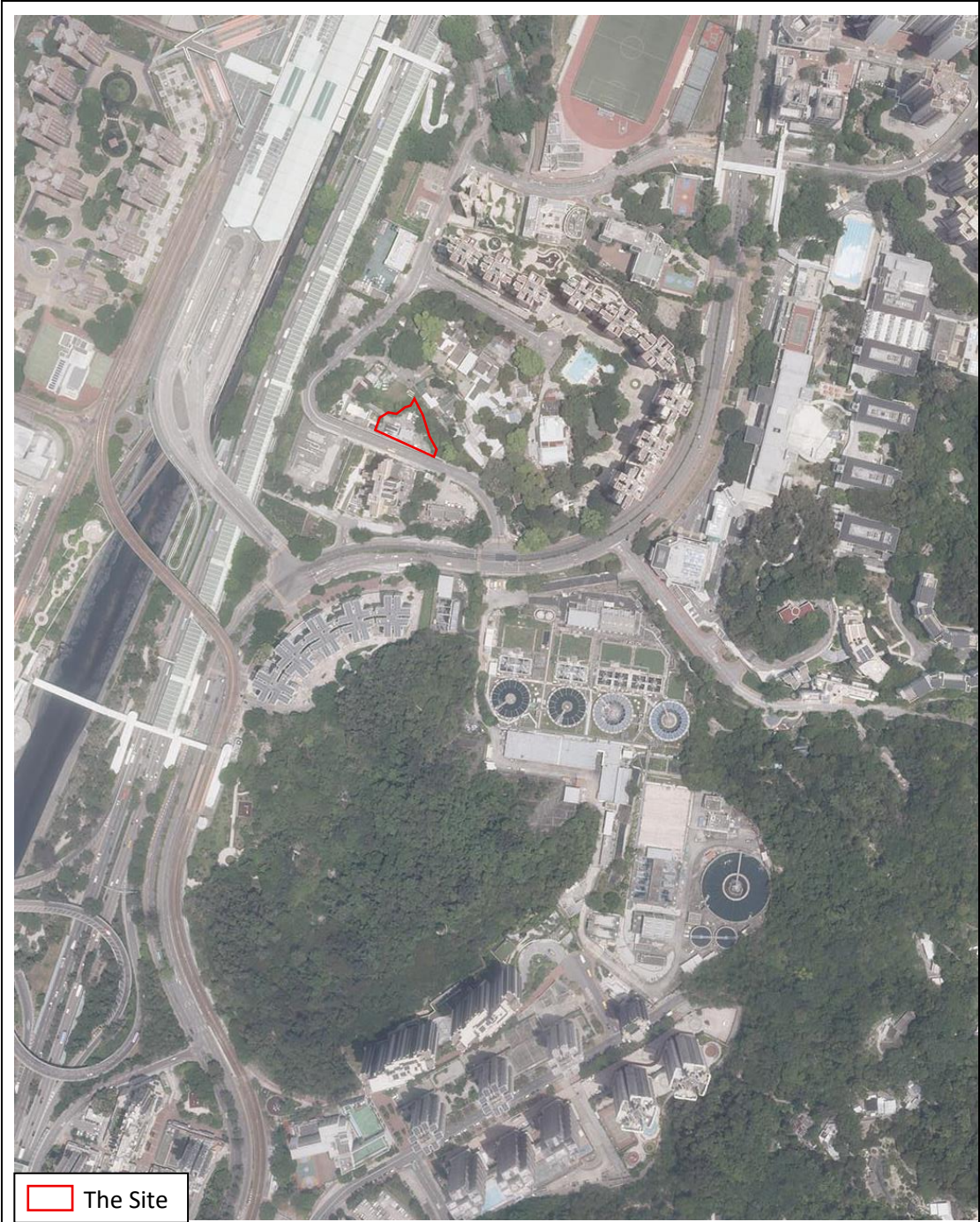


Year	Ref. No.	Observation
2007	CS10250	The Site was occupied as a place of worship.



Year	Ref. No.	Observation
2017	E017524C	The Site was occupied as a place of worship.

  The Site		
Year	Ref. No.	Observation
2020	E095823C	The Site was occupied by a village house and enclosed structures used for residential purpose.



Year	Ref. No.	Observation
2025	E257222C	The Site was occupied by a village house and enclosed structures used for residential purpose.

Appendix D2

Enquiry Letters and Replies from Government
Department

05 January 2026

Our Ref: UGC-LTR-P166-005

By Post

Environmental Protection Department,
Sha Tin - Regional Office (North),
10/F, Shatin Government Offices,
No.1 Sheung Wo Che Road, Sha Tin,
New Territories

Dear Sir or Madam,

Proposed Land Exchange for Social Welfare Facilities and Public Carpark at Lot 496 S.C in D.D. 132 and the Adjoining Government Land

Land Contamination Assessment Study

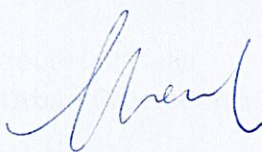
We are the Environmental Consultant to undertake the captioned site to evaluate the possibility of land contamination.

In order to facilitate our study, it would be helpful if you could provide us the following information for the subject site as shown in the attached figure:

1. Accident, spillage and fire records (if any); and
2. Former operator(s) registered as Chemical Waste Producers (if any).

Should you have any queries, please feel free to contact the undersigned at 3565 3317.

Yours faithfully,
Urban Green Consultants Limited



Cheryl Chan
Environmental Consultant
Encl.

25 March 2026

Our Ref: UGC-LTR-P166-006

By Post

Lands Department
District Lands Office, Tuen Mun,
6/F and 7/F, Tuen Mun Government Offices,
1 Tuen Hi Road, Tuen Mun,
New Territories

Dear Sir or Madam,

Section 12A Application for Proposed Rezoning from “Government, Institution or Community (6)” at Tuen Mun, New Territories and to Amend the Notes of the Zone Application to the Site for the Proposed Social Welfare Facility (Residential Care Home for the Elderly) at Section C of Lot No. 496 in D.D 132 and the adjoining Government Land, Tuen Mun, New Territories

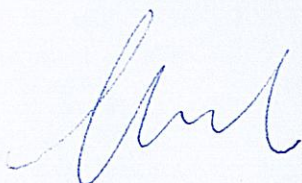
Land Contamination Assessment Study

We are the Environmental Consultant to undertake the captioned site to evaluate the possibility of land contamination.

In order to facilitate our study, it would be helpful if you could provide us the record(s) of the historical land uses involve the Potential Contamination Activities (e.g., storage and handling of chemicals, oils and/or hazardous waste, car repairing workshop, petrol filling station, burn pits, etc.) that have occurred (if any) for the study area as shown in the attached figure.

Should you have any queries, please feel free to contact the undersigned at 3565 3317.

Yours faithfully,
Urban Green Consultants Limited



Cheryl Chan
Environmental Consultant
Encl.

05 January 2026
Our Ref: UGC-LTR-P166-003

By Post

Fire Services Department,
Headquarters Command Management Group,
9/F, Fire Services Headquarters Building,
1 Hong Chong Road, Tsim Sha Tsui East, Kowloon

Attention: Information Officer

Dear Sir or Madam,

**Proposed Land Exchange for Social Welfare Facilities and Public Carpark at Lot 496 S.C in D.D. 132
and the Adjoining Government Land**

**Land Contamination Assessment Study
Request for Information of Dangerous Goods & Incident Records**

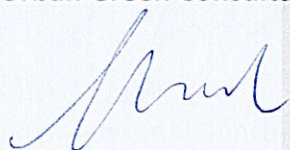
We are the Environmental Consultant to undertake the captioned site to evaluate the possibility of land contamination.

In order to facilitate our study, it would be helpful if you could provide us the following information for the subject site as shown in the attached figure:

1. Accident, spillage and fire records (if any); and
2. Registration of storage of dangerous goods (if any).

Should you have any queries, please feel free to contact the undersigned at 3565 3317.

Yours faithfully,
Urban Green Consultants Limited



Cheryl Chan
Environmental Consultant
Encl.

Cheryl Chan

From: hwwong@epd.gov.hk
Sent: Monday, January 19, 2026 9:44 AM
To: Cheryl Chan
Subject: Re: Proposed Land Exchange for Social Welfare Facilities and Public Carpark at Lot 496SC in DD130 and the adjoining government Land

Dear Ms. Chan,

As spoken in the afternoon of 13 Jan 2026, please find the required information stated in your letter (ref: UGC-LTR-P166-005) below:

1. Accident, spillage and fire records (if any): no record
2. Former operator(s) registered as Chemical Waste Producers (if any): nil

Should you have any queries, please free to contact me.

Regards,

HW WONG
Senior Environmental Protection Inspector
Regional Office (West)
Environmental Protection Department
Tel: 24176103 / 97510284

Cheryl Chan

From: ado_lea_cs@hkfsd.gov.hk
Sent: Tuesday, February 24, 2026 7:28 PM
To: Cheryl Chan
Cc: OE8 CS/FSD
Subject: Re: Fw: Enquiry on Information of Dangerous Goods and Incident Records

Our reference: (19) in FSD GR 6-5/4 R Pt. 62
Your reference: UGC-LTR-P166-003

Dear Sir / Madam,

Proposed Land Exchange for Social Welfare Facilities and Public Carpark at Lot 496 S.C in D.D. 132 and the Adjoining Government Land
Request for Information – Dangerous Goods Record and Records of accidents of spillage/leakage

I refer to your letter dated 5.1.2026 and your email on 15.1.2026 regarding the captioned request and reply below in response to your questions:-

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

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

Best regards,

LEE Yeung, Darwin
Assistant Divisional Officer (Legal Affairs)
Corporate Services Division
Fire Services Department

Tel.: 2733 7896

Remark:
Lift incidents are excluded unless otherwise required.

Disclaimer:

*Fire Services Department uses its best endeavor to ensure the accuracy and reliability of the information provided, but cannot guarantee its accuracy and reliability and accepts no liability of any nature for any loss or damage arising from any inaccuracies or omissions that may from the information provided.

From: Cheryl Chan <cheryl.chan@urbangreen.hk>
Sent: Thursday, January 15, 2026 12:21 PM
To: ADO LEA CS/FSD <ado_lea_cs@hkfsd.gov.hk>
Cc: OE8 CS/FSD <oe_cs_8@hkfsd.gov.hk>; Urban Green <info@urbangreen.hk>; Joan Choi <joan.choi@urbangreen.hk>
Subject: RE: Enquiry on Information of Dangerous Goods and Incident Records

Dear Darwin,

Attached please find the appointment letter and map for your information.

Should you have any enquires, please feel free to contact me.

Regards,
Cheryl
UGC
3565 3317

From: ado_lea_cs@hkfsd.gov.hk <ado_lea_cs@hkfsd.gov.hk>
Sent: Wednesday, January 14, 2026 6:46 PM
To: Urban Green <info@urbangreen.hk>
Cc: OE8 CS/FSD <oe_cs_8@hkfsd.gov.hk>
Subject: Re: Enquiry on Information of Dangerous Goods and Incident Records

Our reference: (19) in FSD GR 6-5/4 R Pt. 62

Your reference: UGC-LTR-P166-003

Dear Sir / Madam,

**Proposed Land Exchange for Social Welfare Facilities and Public Carpark at Lot 496 S.C in D.D. 132 and the
Adjoining Government Land
Request for Information – Dangerous Goods Record and Records of accidents of spillage/leakage**

I refer to your letter on 5.1.2026 regarding the captioned subject.

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

- (i) Dangerous Goods Licence Record: from the year of 1990 to present moment.
- (ii) Incident Record: Past three years of fire and special services incidents. Lift incidents will be excluded unless otherwise required.

Please also submit the appointment letter from your client for record and an e-map of the assessment area, in high resolution, to us for follow-up.

To go green and shorten your waiting time, you are highly encouraged to make request for information of incident records to us through email at aio_fsd@hkfsd.gov.hk in future.

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

Best regards,

LEE Yeung, Darwin
Assistant Divisional Officer (Legal Affairs)(Acting)
Corporate Services Division
Fire Services Department

Tel.: 2733 7896

[attachment "P166_map.pdf" deleted by ADO LEA CS/FSD/HKSARG] [attachment "P166_Appointment letter.pdf" deleted by ADO LEA CS/FSD/HKSARG]

Appendix D3

Site Walkover Checklist & Photo records

Site Walkover Checklist

GENERAL SITE DETAILS

Site Owner/ Client	Richmond Garden Estate
Property Address	Lot 496 S.C in D.D. 132 and adjoining government land
Person Conduction the Questionnaire	Name: Yan Lee Company: Urban Green Consultants Ltd.
Authorised Owner/ Client	Charles Ng

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/ chemicals/ materials handled. **Obtain a flow schematic if possible.**

(Please see the last page of Site Walkover Checklist.)

Number of employees: NA Full-time: NA

Part-time: NA

Temporary/Seasonal: -

Maximum no. of people on site at any time: -

Typical hours of operation: (per week) -

Number of shifts: -

Days per week: -

Weeks per year: -

Scheduled/ expected date of service discontinuance: -

Detail the main sources of energy at the site:

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

SITE DESCRIPTION

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

What is the total site area: 1,770 m²

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

Richmond Garden Estate

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

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

If yes, identify those parties: e.g. 。

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

North: Ching Leung Nunnery

South: Tuen Fu Road Disciplined Services Quarters

East: Gig Lok Monastery

West: Village Houses

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

Flat terrain

State the size and location of the nearest residential communities.

- Village Houses on the west of the Site (approx. 20m from the site boundary)
- Tuen Fu Road Disciplined Services Quarters (approx. 15m from the site boundary)
- Tuen Mun Treatment Works Staff Quarters (approx. 34m from the site boundary)

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

NA

Questionnaire with Existing/Previous Site Owner or Occupier

		Yes/No	Notes
1.	What are the main activities/operations at the above address?	-	Residence
2.	How long have you been occupying the site?	-	7 years
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	No	-
4.	Prior to your occupancy, who occupied the site?	-	No information
5.	What were the main activities/operations during their occupancy?	-	Religious institution/school/housing
6.	Have there been any major changes in operations carried out at the site in the last 10 years?	No	-
7.	Have any polluting activities been carried out in the vicinity of the site in the past?	No	-

		Yes/No	Notes
8.	To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	No	-
9.	Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	No	-
10.	Do you have any registered hazardous installations as defined under relevant ordinance? (If yes, please provide details.)	No	-
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	No	-
	• What are the contents of these tanks?	-	-
12.	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	No	-
13.	Has the facility produced a separate hazardous substance inventory?	No	-
14.	Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If, yes, please provide details.)	No	-
15.	How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags. Silos, cisterns, vaults and cylinders)?	-	Truck
16.	Do you have any underground storage tanks? (If yes, please provide details.)	No	-
	• How many underground storage tanks do you have on site?	-	-
	• What are the tanks constructed of?	-	-
	• What are the contents of these tanks?	-	-
	• Are the pipelines above or below ground?	-	-
	• If the pipelines are below ground, has any leak and integrity testing been performed?	-	-
	• Have there been any spills associated with these tanks?	-	-
17.	Are there any disused underground storage tanks?	No	-

		Yes/No	Notes
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	-	No underground storage tank
19.	How are the wastes disposed of?	-	General waste would be disposed to public general waste bin
20.	Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	No	-
21.	Have any spills occurred on site? (If yes, please provide details.)	No	-
	• When did the spill occur?	-	-
	• What were the substances spilled?	-	-
	• What was the quantity of material spilled?	-	-
	• Did you notify the relevant departments of the spill?	-	-
	• What were the actions taken to clean up the spill?	-	-
	• What were the areas affected?	-	-
22.	Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	No	-
23.	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	No	-
24.	Are there any known contaminations on site? (If yes, please provide details.)	No	-
25.	Has the site ever been remediated? (If yes, please provide details.)	No	-

Observations

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

Photo-documentation of Site Inspection

	
<u>Photographic Record: (P01)</u> The Site is fully covered by concrete slab.	<u>Photographic Record: (P02)</u> The Site is currently occupied by a village house and enclosed structures for residential purposes.
	
<u>Photographic Record: (P03)</u> The Site is currently occupied by a village house with hard paving.	<u>Photographic Record: (P04)</u> The Site is currently occupied by a village house and enclosed structures for residential purposes.

Photo-documentation of Site Inspection



Photographic Record: (P05)
Enclosed structure is located in the Site for residential uses.



Photographic Record: (P06)
Enclosed structure is located in the Site for residential uses.



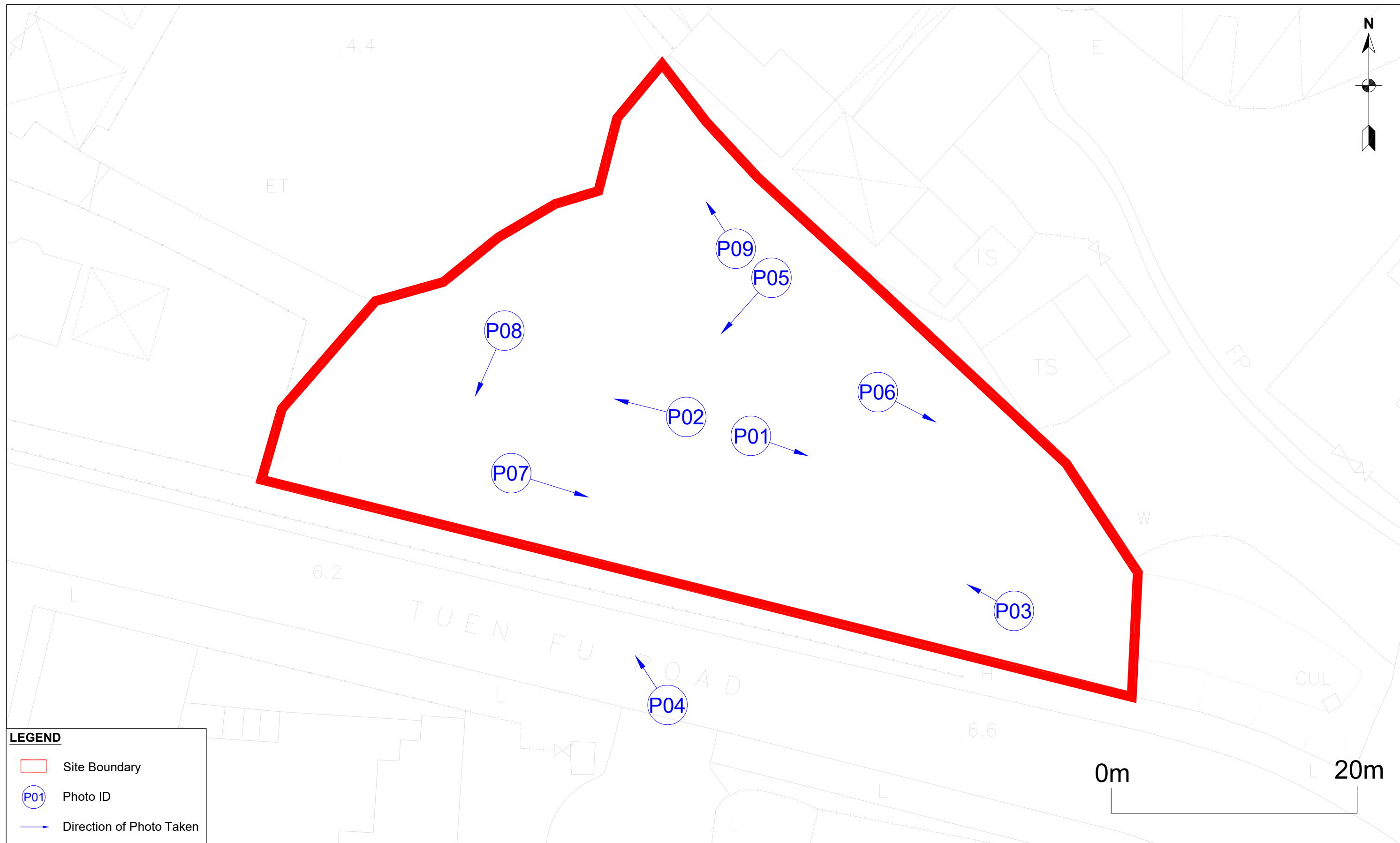
Photographic Record: (P07)
The site is fully covered by concrete slab, and the ground is observed to be in good condition.



Photographic Record: (P08)
The site is fully covered by concrete slab, and the ground is observed to be in good condition.

Photo-documentation of Site Inspection

	
<u>Photographic Record: (P09)</u> The site is fully covered by concrete slab, and the ground is observed to be in good condition.	



LEGEND

- Site Boundary
- Photo ID
- Direction of Photo Taken



Section 12A Application for Proposed Rezoning from "Government, Institution or Community" to "Government, Institution or Community (6)" at Tuen Mun, New Territories and to Amend the Notes of the Zone Applicable to the Site for the Proposed Social Welfare Facility (Residential Care Home for the Elderly) at Section C of Lot No. 496 in D.D 132 and the adjoining Government Land, Tuen Mun, New Territories

Index Plan of Photographic Records

Appendix D3

Rev. 1