

Appendix 4

Environmental Assessment

Prepared for
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PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS
LOTS IN D.D.107 **AND ADJOINING GOVERNMENT
LAND** , FUNG KAT HEUNG, YUEN LONG

ENVIRONMENTAL ASSESSMENT

Bina



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1. INTRODUCTION

1.1 Background

- 1.1.1 A residential development (Proposed Development) has been proposed by the Applicant at various lots and adjoining government land in D.D. 107 in Fung Kat Heung, Yuen Long (the Application Site).
- 1.1.2 The Application Site falls primarily within the “Industrial (Group D)” (“I(D)”) zone with a minor portions of it falling within “Residential (Group A)” (“R(A)”) and “Agriculture” (“AGR”) zones under the Approved Kam Tin North Outline Zoning Plan (OZP) No. S/YL-KTN/11.
- 1.1.3 Ramboll Hong Kong Limited is commissioned to provide consultancy service to prepare this environmental assessment (EA) report as a technical supporting document to demonstrate that the Proposed Development is environmentally acceptable by addressing potential environmental noise and, air quality impact on the Proposed Development while other environmental issues are generally discussed.
- 1.1.4 The design of master layout plan (MLP) and other technical information on the Proposed Development are provided by the Project Architect, whereas the traffic forecast is provided by the Project Traffic Consultant (CTA Consultants Limited).

1.2 The Application Site and Its Environs

- 1.2.1 The Application Site is approximately 7290m². It is located in Fung Kat Heung, abutted to an access road on east side. The Application Site is currently used as an open carpark.
- 1.2.2 To the northeast of the Application Site is Lam Tsuen Country Park. To the immediate east and south are scattered temporary structures, Miu Kwok Monastery and a wedding venue. To the immediate west is currently a logistic centre.
- 1.2.3 It is noted that Sha Po Public Housing Development (SPPHD) is proposed to the immediate west of the Application Site and planned to be commenced by 2025 and completed by 2031. An engineering feasibility study (EFS) of the proposed SPPHD was submitted as one of the supporting documents for the OZP amendment (RNTPC Paper No. 9/22). Its findings have been referenced where appropriate (hereafter referred as “EFS Final Report”).
- 1.2.4 Figure 1.1 shows the location of the Application Site and its environment.

1.3 The Proposed Development

- 1.3.1 The Proposed Development comprises 2 residential towers (Tower 1 and Tower 2) of 47 and 49 residential floors (excluding 1 refuge floor) respectively, providing a total of 1439 residential units. There is also 1 storey of underground carpark.
- 1.3.2 The clubhouse would be served with central air-conditioning system and not rely on openable windows for ventilation. The maximum building height for the Proposed Development is 156mPD.
- 1.3.3 Associated works outside site would include construction of drainage, sewerage connection (underground pipework) and road connection (widening of around 90m length of sub-standard village road to 6m-width carriageway plus 1.2m footpath to the immediate northeast of the Application Site which is analogous as local feeder road) etc. As advised by the project traffic consultant, the access road is considered as feeder road because it only connects with nearby villages and other remote

settlements. After widening, the access road will serve the Proposed Development and the aforementioned villages & remote settlements. The service coverage is generally the same. Therefore, there is no change of the road type before and after improvement works.

- 1.3.4 The tentative completion year is 2035 after the tentative completion year of Sha Po Public Housing Development (in 2031). The master layout plan, floors plans and section plan of the Proposed Development are shown in Appendix 1.1.

1.4 Appraisal of Environmental Impacts

Air Quality

- 1.4.1 Site surveys were conducted on 09 & 28 February 2024 and 01 August 2024 to identify any environmental nuisance and focus on area within 200m from the Application Site. The potential industrial emission, vehicular emission and odour impact has been addressed in this context.

Road Traffic Noise Impact

- 1.4.2 All major roads with heavy traffic (e.g. San Tam Road, San Tin Highway to the west) are distant apart, maintain more than 400m from the Application Site, and will be completely shielded by the planned SPPHD which will be in place before the completion of the proposed development. The major road traffic noise source surrounding the Application Site is arising from Fung Kat Heung Road, the planned road links based on SPPHD and access roads to the north and east. Road traffic noise impact assessment has been conducted to address the potential road traffic noise impact.

Railway Noise Impact

- 1.4.3 There is no existing railway system within 300m from the Application Site.
- 1.4.4 Besides, it is understood that the proposed Northern Link (NOL) is tentatively laid along San Tin Highway. Given that the proposed alignment would be located underground and out of the 300m assessment area, railway noise impact on the Proposed Development is unlikely a concern.

Fixed Noise Impact

- 1.4.5 Site surveys were conducted on 09 February, 28 February, 21 March and 01 August 2024 to identify any environmental nuisance. A recycling workshop is identified as fixed noise source within 300m from the Application Site and it has been taken into account in the fixed noise impact assessment.

Water Quality Impact

- 1.4.6 There is no existing drainage and sewerage system serving the Application Site. A surface drain is found partially within southern portion of the Application Site but unlikely functions to collect all surface runoff from the Application Site. It is understood that public drainage and sewerage systems have been proposed under the SPPHD. The Proposed Development would connect to the future SPPHD drainage and sewerage systems for proper discharge of treated surface runoff and effluent. All sewage and wastewater effluents generated from operation of Project should be properly collected and discharged to the public sewers for proper treatment and disposal. To minimise water quality impact from operation of the Project, discharge should comply with the requirements of discharge licence under the Water Pollution Control Ordinance (WPCO). During operation of the Project, all wastewater generated onsite will be collected and discharged via the terminal manhole to public sewerage system. In addition, surface runoff from storm will be collected and appropriate facilities such as

sand trap and oil interceptor will be provided to remove the pollutants before discharge to public drainage system. ProPECC PN 1/23 will be referenced and followed. No adverse water quality impact during operation of the project is anticipated.

- 1.4.7 Separate drainage impact assessment (DIA) and sewerage impact assessment (SIA) have been prepared to address potential drainage and sewerage impact during operation of the Proposed Development. The Average Dry Weather Flow (ADWF) of sewage discharge is estimated to be 1,061m³/ day (i.e. peak flow 73.7 litre/sec, peak flow with swimming pool backwash being 79.6 litre/sec). The sewage will be conveyed by connecting to the future sewerage system proposed by SPPHD. Based on engineering feasibility study (EFS) of the SPPHD, the sewage collected would be diverted to the Sha Po Sewage Pumping Station and eventually treated in Yuen Long Sewage Treatment Works (YLSTW). On the other hand, adequate drainage system should be designed for the Project to minimise the impact from increased surface runoff. Adequate drainage system should be designed for the runoff from 50 year-return-period rainstorm; and provided with appropriate screening facilities (e.g., silt trap) and oil interceptors, as required.
- 1.4.8 The design of stormwater drainage system shall follow the relevant guidelines and practices as given in the ProPECC PN 1/23. It means that proper measures such as silt removal facilities and petrol interceptors will be provided in future. Manholes, gullies and oil interceptors should be cleaned and inspected regularly. Additional inspection and cleansing should be carried out before forecast of heavy rainfall.
- 1.4.9 However, an onsite sewage treatment plant (STP) has been proposed within the Application Site as a fallback option to discharge treated effluent to public drainage system in case the future sewerage system proposed by SPPHD cannot be completed before the completion of the Proposed Development or the capacity of the planned sewerage system cannot cater discharge from the Proposed Development. Effluent discharge, if not treated, will result in water pollution and impact the downstream environmental water (ponds in this case, which is considered as Group C Inland Water). Membrane bioreactor (MBR) or equivalent is recommended to achieve required effluent discharge standard as set out in EPD's Technical Memorandum – Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS) (see Appendix 1.2 for relevant discharge standard) and designed in accordance with the requirement in the “*Guidelines for the Design of Small Sewage Treatments Plants*” issued by EPD.
- 1.4.10 The onsite STP will be subject to later detailed design and submissions. The STP will also be subject to regular maintenance to ensure that it functions in designed condition and optimal performance and can minimise any emergency situation. In addition, regular self-monitoring will be conducted to ensure the quality of the treated effluent shall meet the applicable standard before discharge. Monitoring programme will be devised for T&C of the system. A discharge licence is required for its operation, and it will be applied prior the development commencement. Monitoring requirement under the licence would be strictly followed as per WPCO. Necessary discharge standards, as set out in TM-DSS will be adopted. The onsite STP will be implemented before operation of the Proposed Development. There will not be untreated wastewater discharge to nearby water sensitive receivers during its operation. No adverse operational water quality impact from the onsite STP is anticipated.
- 1.4.11 The Applicant will be responsible for the construction, operation and maintenance of the STP. When there is a public sewer available in close proximity to the Application Site in future, the Applicant will make connection to the public sewer and dismantle the proposed underground STP subject to the agreement of DSD and EPD.

Waste Management for Operational Phase

- 1.4.12 During operation of the project, there will be waste generation from residential and commercial use such as glass, metals, paper, plastics, food wastes, textile, wood, household hazardous wastes and others. Adequate waste collection/storage facilities will be provided for collection and storage of sorted recyclable wastes (glass, paper, metal, plastic) to enable recycling. Based on “*Waste Statistics for 2023*”, the municipal solid waste (MSW) disposal rate was 1.44kg/person/day in year 2023 and the recovery rate for recycling was 33% of the MSW generated. By calculation, the MSW generation rate, disposal rate and recycled rate were 2.15kg/person/day, 1.44kg/person/day and 0.71kg/person/day in year 2023 respectively. Based on the Proposed Development with around 4,000 residential population and 41 working population, there will be around 5.82tonnes/day of MSW generation (i.e. $2.15 \times 4,041$). With adequate waste collection/storage facilities provided to segregate recyclable and non-recyclable wastes, it is assumed that up to around 33% of waste (i.e. 2.87 tonnes/day) can be recycled, which will reduce the burden of waste treatment facilities in Hong Kong.
- 1.4.13 General refuse will be collected on daily basis, while the non-recyclables will be delivered to landfill. For recyclables, recycling bins will be provided for promoting waste separation at source and proper recycling practices. The recyclables will then be sent to recyclers for further materials recovery and recycling with delivery when recyclable waste storage facility is nearly full. In addition, the Applicant will explore in detailed design stage to collect food waste alongside these recyclable wastes mentioned above to further reduce waste generation.

Construction Phase Environmental Impact

- 1.4.14 The major air quality impact during construction should be fugitive dust impact in relation to dusty activity & emission from dusty materials and gaseous & particulate matter (PM) emissions from the construction vehicles and powered mechanical equipment (PME). Best management practice and practical mitigation measures will be adopted where appropriate.
- 1.4.15 Construction noise is usually generated by using powered mechanical equipment. It will be controlled with reference to relevant technical memorandum. Best Management practice will be adopted where appropriate to suppress the impact.
- 1.4.16 For water quality aspect, during construction of the Proposed Development, water pollution is likely due to sediments, construction runoff and drainage, sewage effluent and liquid spillage if not mitigated. Best management practice will be adopted. No sewage effluent discharge will be allowed. ProPECC PN 2/24 on construction site drainage will be observed and followed.
- 1.4.17 Waste generation during construction will be sorted and handled in compliance with the Waste Disposal Ordinance and regulations.
- 1.4.18 With adequate mitigation measures incorporated during construction of the project, no significant construction phase environmental impact is anticipated. Further discussion on construction phase environmental impact is also included in Section 5.

EIAO Implication

- 1.4.19 The Application Site falls in area mainly zoned “Industrial (Group D)” (“I(D)”) and remaining area zoned “Agriculture” use. It is located in inland area (not close to any coastal area) and outside Deep Bay Buffer Zone 1 & 2. All related construction works are land-based. The proposed development is residential in nature. Associated works outside site would include construction of road connection, drainage and sewerage connection (underground pipework), etc. The road work is limited to access road

construction which would not be district distributor or higher. TD's correspondence regarding the road type before and after road work will be provided for substantiation when it is available. All infrastructure construction works will be carried out within area zoned I(D) and no works will be within or partially within sensitive areas (e.g. conservation area on the northern side of the Application Site). Under the original proposal, there is no sewage treatment plant onsite. The sewage discharge will be connected to the planned sewerage system of SPPHD and eventually to the to-be-upgraded Sha Po Sewage Pumping Station. However, a sewage treatment plant has been proposed within the Application Site as a fallback option for treating sewage generated by the proposed residential development in case the future sewerage system proposed by SPPHD cannot be completed before the completion of the Proposed Development of the Application Site or the capacity of the planned sewerage system cannot cater discharge from the proposed development. The sewage generation of the Proposed Development based on sewerage impact assessment is about 1,061 m³/day so that the capacity of the onsite STP (required under fallback option) is below 5,000 m³/d and not considered a designated project.

- 1.4.20 The potential EIAO implication of the proposed residential development is evaluated in respect of items A.1, F.1/F.2, P.1 and Q.1, Part I, Schedule 2 of the EIAO. Based on the aforementioned, the road work does not include expressway, trunk road, primary distributor or district distributor (A.1); there is no sewage treatment works/facility with installed capacity more than 5,000m³/d even under fallback option (a design capacity of 55.1L/s is proposed, which is equivalent to 4760m³/d) (F.1/F.2); proposed residential development is outside Deep Bay Buffer Zone 1 & 2 (P.1); there is no earthwork, dredging and other building work partly or wholly within any sensitive area (Q.1).
- 1.4.21 It is considered that the proposed development and its associated work does not fall within the definition of designated projects under EIAO.

1.5 Organization of this Report

1.5.1 The report is structured as follows: -

- Section 2 is an air quality impact assessment;
- Section 3 is a road traffic noise impact assessment;
- Section 4 is a fixed noise impact assessment;
- Section 5 includes discussion of construction phase air quality, noise, water quality and waste management issues; and
- Section 6 is a concluding summary.

2. AIR QUALITY IMPACT ASSESSMENT

2.1 Introduction

- 2.1.1 This section evaluates the air quality impact during operation of the Proposed Development. Table 3.1 in Chapter 9 of the Hong Kong Planning Standards and Guidelines (HKPSG) has been referenced for provision of buffer separation from identified air pollution sources in the vicinity.

2.2 Industrial Emission Impact

- 2.2.1 The Application Site is mainly surrounded by low density residential developments, village type developments, green belt, and rural landscape. Although the Proposed Development is next to I(D) zone, the surrounding area mainly consists of village houses, site offices, enclosed warehouse and temporary vehicle retail shops/ open storage of brand-new vehicles. As such, there is no active/heavy industrial operation with emission identified in the vicinity. Therefore, no adverse I/R interface problem is anticipated. Site survey was conducted on 09 and 28 February 2024 and 01 August 2024 to identify any environmental nuisance and focus on area within 200m from the Application Site.
- 2.2.2 It is observed that there are two (2) chimneys situated over 100m (i.e. ~107m) to the northeast of the Application Site for a lard boiling factory. Nevertheless, with reference to the Section 16 (S16) Planning Application (Application No.: A/YL-KTN/445) approved by Town Planning Board (TPB) on 28 November 2014 for “Proposed Temporary Offensive Trades – Lard Boiling Factory for a Period of 5 Years”, the application was approved on a temporary basis for a period of 5 years until 28 November 2019. Since then and 5 years were lapsed, no further planning application for minor amendment (extension of time) of the approved S16 Planning Application or new planning application for proposing the lard boiling factory was submitted. Besides, it was confirmed by EPD’s regional office that there is no valid licence of Specified Process within 200m assessment area currently. The reply from EPD is provided in Appendix 2.1. Moreover, there was no operation at the facility as observed during the site visits conducted on 9 February 2024 (from 10:00 a.m. to 1:00 a.m.), 28 February 2024 (from 10:00 a.m. to 1:00 a.m.), 1 August 2024 (from 10:00 a.m. to 1:00 a.m.) and 24 June 2025 (from 2:00 p.m. to 5:30 p.m.). According to the observation during site visits conducted on 9 February 2024, 28 February 2024 and 1 August 2024, there was no operation of this lard boiling factory and no one attended to this factory (i.e. no interview could be conducted). The lard boiling factory is fenced off. There was no noise from inside and no noticeable emission (from chimneys) observed. According to the observation during site visit conducted on 24 June 2025 while the gate was opened, there was no operation of this land boiling factory. The open area of the site was being used for temporary storage of construction materials. The photo records are provided in Appendix 2.2. Based on the above, it is believed that the factory has ceased operation and therefore the chimneys were abandoned and considered no longer in use. Should any operations or activities be found at the lard boiling factory in later stage of the project, the applicant will carry out an updated air quality impact assessment to reflect the latest situation. Other than the identified abandoned chimneys, no other emission like fluff, odour, smoke was identified within the study area. On the other hand, the planned SPPHD abuts the Application Site to its immediate west. The nearest SPPHD building (i.e. Tower 10) is situated 10m away from the Application Site boundary. It is understood that the planned SPPHD does include 16 numbers of residential blocks and GIC facilities. There is no industrial use proposed within the planned SPPHD. It is therefore not considered as an air pollution source. No adverse air quality impact due to its future operation is anticipated.

- 2.2.3 Given that the Proposed Development is a residential development, there is no industrial use/ chimney proposed (only chimney for emergency generator set will be provided which will operate under emergency situation in case of electricity supply failure). Therefore, it is not considered environmental polluting in nature.

2.3 Odour Impact

- 2.3.1 As mentioned above, there was a lard boiling factory in the vicinity of the Application Site. According to the site visits conducted on 9 February 2024 (from 10:00 a.m. to 1:00 a.m.), 28 February 2024 (from 10:00 a.m. to 1:00 a.m.), 1 August 2024 (from 10:00 a.m. to 1:00 a.m.) and 24 June 2025 (from 2:00 p.m. to 5:30 p.m.), it is considered that the factory has ceased operation and there was no noticeable odour observed. According to the onsite observation, there is no noticeable odour impact at the Application Site such as smell of joss burning, sewage, etc. Moreover, the nearest sewage pumping station (SPS)/sewage treatment works (STW) is Sha Po Sewage Pumping Station located about 300m to the west of the Application Site so that adverse odour impact on the proposed development at the Application Site is not anticipated. The nearest livestock farm is a pig farm on northern side of Mo Fan Heung at over 500m to the northwest and already abandoned as observed onsite (see Figure 2.2). Given it is abandoned and also far away from the Application Site, adverse odour impact is not anticipated as well.
- 2.3.2 Miu Kwok Monastery is identified and located over 60m to the east of the Application Site. It is a Buddhism place of worship. According to the information told by the operator and the observation during onsite surveys conducted on 9 February 2024 and 1 August 2024, there is no niche, columbarium or incineration facility inside the monastery. The worshipers visiting the monastery are mainly for chanting Buddhist sutras and meditation. Therefore, joss paper burning activity would not be performed. In addition, no joss paper burning facility was observed during onsite visits. As advised by the operator, only small scale of joss paper burning activity would be performed occasionally (i.e. the amount of joss paper to be burnt is very low and the number of joss burning activity is very limited). Even joss burning activity is performed, only a movable small-scale burning container will be used. The movable small-scale burning container will only be taken out when it is needed. During onsite surveys, the movable small-scale burning container was not observed as no joss burning activity was performed (i.e. no photo of the movable small-scale burning container was recorded). Two incense stick containers with few burning incense sticks were observed during onsite surveys. As told by the operator, each worshiper would burn 1 to 2 incense sticks only as guided and managed by the operator. As confirmed by the operator, the visit of worshipers to the monastery is generally low and there is no peak usage pattern in any particular festival days (like Ching Ming Festival and Chung Yeung Festival) and even on Buddhism Birthday. The onsite photo records are provided in Appendix 2.3. According to the onsite survey conducted on 24 June 2025, Miu Kwok Monastery has been closed for the visit of public until September 2025. Therefore, onsite survey within Miu Kwok Monastery could not be conducted. Odour from the identified monastery (due to incense stick burning as verified in onsite survey) cannot be noticed within and surrounding the Application Site. ECD section of EPD has been requested to check whether there is any odour complaint with respect to the surrounding area. According to the reply, there is no odour complaint received in the past five years (2019 to 2024) with respect to 200m assessment area from the Application Site (see Appendix 2.5). It is further clarified by ECD section of EPD that there are no records of air / odour complaints associated with the lard boiling factory and Miu Kwok Monastery in the past 5 years (see Appendix 2.5). Based on the above, no adverse odour impact from the monastery is anticipated.

- 2.3.3 As shown in Figure 2.2, a recycling workshop was found. The workshop is operated for the recycling of “waste cooking oils”. According to the observation during onsite surveys conducted on 9 February 2024 and 28 February 2024, the workshop was tidy and clean, no processing of waste cooking oils and related facilities was observed, the containers identified within the workshop were well-maintained, and no odour from the workshop was observed. The photo records are provided in Appendix 2.4. According to the reply from ECD section of EPD, there is no odour complaint received in the past five years (2019 to 2024) with respect to 200m assessment area from the Application Site, or associated with the identified recycling workshop (see Appendix 2.5). Based on the above, no adverse odour impact from the workshop is anticipated.
- 2.3.4 On the other hand, it is understood that there is no SPS/RCP or any other odorous facility anticipated in the future SPPHD (according to the EFS final report) as well as the Proposed Development at the Application Site, except a sewage treatment plant (STP) has been proposed as a fallback option for treating the sewage generated by the Project (design capacity: 4760m³/d). Therefore, potential odour impact would be generated by the proposed STP. The locations of the proposed STP and the potential exhaust outlet are shown in Figure 2.3. The separation distances between the potential exhaust outlet and the nearest air-sensitive uses of the Proposed Development and the nearby ASRs are 26m and 25m (proposed SPPHD Tower 10) respectively. In order to mitigating the odour impact generated by the proposed STP, it is recommended the environmental consideration in the EPD's Guidelines for the Design of Small Sewage Treatment Plants should be followed and to implement the following measures to contain and mitigate the potential odour impact:
- The proposed STP will be totally enclosed and the treatment tanks will be placed underground.
 - Negative pressure ventilation will be provided within the enclosure to avoid any fugitive odorous emission from the proposed STP.
 - Proper mixing will be provided at the equalization and sludge holding tanks to prevent sewage septicity.
 - Chemical or biological deodorization units with at least 99.5% odour removal efficiency will be provided to treat the potential odorous emissions from the STP to minimize any potential odour impact to the nearby ASRs.
 - The deodorization units should be regularly maintained to ensure at least 99.5% odour removal efficiency.
 - The deodorization units should be designed such that the discharge point (i.e. the exhaust outlet) will be directed away from the nearby ASRs.
- 2.3.5 With reference to Table 3.3 and Table 3.4 of the approved EIA report for Expansion of Sha Tau Kok Sewage Treatment Works (Register No.: AEIAR-207/2017), the shortest separation distance between the nearest ASR (i.e. A8) and site boundary of the sewage treatment works with a design ADWF of 5000m³/day is 20m and the % of odour removal efficiency is 99.5%, respectively. The predicted 5-second odour concentrations at the ASR A8 would be in the range of 0.03OU to 0.13OU at the heights of 1.5m to 10.5m above ground as stated in Table 3.7 of the approved EIA report, which is well below the odour criterion of 50U.
- 2.3.6 With the implementation of the above recommended mitigation measures on the proposed STP and the reference above, it is anticipated that no adverse odour impact would be generated by the proposed STP on the nearby ASRs.

2.4 Vehicular Emission Impact

- 2.4.1 The Application Site is bounded by Fung Kat Heung Road and access roads to its immediate north and east. As advised by the Project Traffic Consultant, these roads are not covered in Annual Traffic Census and therefore considered as feeder road, and serve for local access in nature. Comments from TD on the road type is being sought and will be provided in due course. Given that there is no specific requirement for the feeder road under HKPSG, 5m buffer distance will be provided as the traffic volume of the access roads are minimal. It is also noted that all carriageways within the Application Site will be designated as EVA. Since the roads within the Application Site are EVA, the minimum buffer distance required in Table 3.1 in Chapter 9 of the HKPSG is not applicable for these roads.
- 2.4.2 Figure 2.1 shows the separation distance provided. Apart from residential towers, clubhouses are also proposed within the Proposed Development. The clubhouses will be central air-conditioned and will not rely on openable window for ventilation. It is understood that the eastern clubhouse is situated underground and its air intake location should be located at grade. Part of the eastern clubhouse extent will fall within the buffer zone. Therefore, the fresh air intake locations for eastern clubhouse shall be allocated outside the buffer zone to achieve adequate separation. No air sensitive uses including openable windows, fresh air intake and recreational uses in open space shall be located within the buffer zone. Therefore, no adverse vehicular emission impact is anticipated.
- 2.4.3 Carparking facilities will be provided on the basement level. EPD's ProPECC PN 2/96 on Control of Air Pollution in Car Parks will be followed for the design and operation of the proposed carpark such that the air quality guidelines set out in the PN are met under all conditions. For example, all exhaust locations of the proposed carpark will be designed to be away from any existing and future air sensitive receivers.

2.5 Conclusion

- 2.5.1 According to site surveys, it is observed that the identified chimneys located at lard boiling factory are no longer in use. As there are no other planned or proposed chimneys identified within the study area, no adverse air quality impact from the industrial emission sources / chimneys is anticipated.
- 2.5.2 Moreover, the nearest SPS/STW, Sha Po Sewage Pumping Station, is located more than 200m away from the Application Site, meeting the minimum buffer distance as required in Table 3.1 in Chapter 9 of the HKPSG. The identified lard boiling factory and the pig farm on northern side of Mo Fan Heung are found to be abandoned according to site survey observation. Furthermore, during onsite surveys, no odour from the Miu Kwok Monastery and recycling workshop was observed. According to the reply from ECD section of EPD, there is no odour complaint received in the past five years. Based on the above, no adverse odour impact from the identified potential odour sources within study area is anticipated.
- 2.5.3 Similarly, there is no other planned odorous facility in the future SPPHD and in the Proposed Development at the Application Site, except a STP has been proposed as a fallback option for treating the sewage generated by the Project. With the implementation of the recommended mitigation measures on the proposed STP and the reference as mentioned in Section 2.3.4 and Section 2.3.5, it is anticipated that no adverse odour impact would be generated by the proposed STP on the nearby ASRs.
- 2.5.4 Buffer zones are defined with respect to adjacent roads. It is also noted that all carriageways within the Application Site will be designated as EVA. Since the roads within the Application Site are EVA, the minimum buffer distance required in Table 3.1

in Chapter 9 of the HKPSG is not applicable for these roads. No air sensitive uses including openable windows, fresh air intake and recreational uses in open space shall be located within the buffer zone as stipulated in the HKPSG. Carpark is proposed at the Application Site. EPD's ProPECC PN 2/96 will be observed and followed for the design and operation of carpark.

- 2.5.5 It is considered that no adverse air quality impact on and arising from the Proposed Development is anticipated.

3. ROAD TRAFFIC NOISE IMPACT ASSESSMENT

3.1 Introduction

- 3.1.1 This road traffic noise impact assessment is prepared to address potential road traffic noise impact on the noise sensitive uses of the Proposed Development and to recommend mitigation measures where practicable to attenuate the impact.

3.2 Assessment Criteria

- 3.2.1 Noise standards are recommended in the Hong Kong Planning Standards and Guidelines (HKPSG) for planning against noise impact from sources such as road traffic, railway and aircraft. The Proposed Development comprises residential towers, clubhouse, carpark and associated plant rooms. The clubhouse will be air conditioned and will not rely on open window for ventilation, which is not considered as noise sensitive in nature. Only domestic premises in the proposed development is identified as noise sensitive. Under the HKPSG, the criterion for road traffic noise impact on domestic premises (habitable rooms) is $L_{10(1\text{-hour})}$ 70dB(A).

3.3 Assessment Methodology

- 3.3.1 In the assessment, the potential noise impact arising from nearby road carriageways on the development has been assessed.
- 3.3.2 It involved the prediction of future noise impacts on Noise Sensitive Receivers (NSRs) arising from traffic flows along existing and future road carriageways situated within the vicinity of the Application Site. Calculation of predicted road traffic noise was based on the worst case peak hour traffic flows projected within a 15-year period from the tentative completion date (Year 2035) of the Proposed Development. For worst-case scenario evaluation, the assessment year was chosen to be Year 2050, which has the maximum forecasted traffic flow within the 15-year period (i.e. with the induced road traffic flow from the adjacent proposed SPPHD development based on its full operation included). The year 2050 traffic forecast data is attached in Appendix 3.1. Endorsement of the traffic forecast will be provided once available.
- 3.3.3 The U.K. Department of Transport's procedure "Calculation of Road Traffic Noise" (CRTN) was used to predict the hourly $L_{10(1\text{-hour})}$ noise levels generated from road traffic at selected representative NSRs. Practicable environmental mitigation measures have been recommended, where necessary. The predicted noise levels were compared with the relevant HKPSG noise standards (i.e. $L_{10(1\text{-hour})}$ 70dB(A)).
- 3.3.4 In this assessment, all roads are assumed of impervious surface.

3.4 Noise Sensitive Receivers

- 3.4.1 A number of Noise Sensitive Receivers (NSRs), which represent the openable window location of all habitable rooms and are likely to be subject to adverse traffic noise impacts, were selected for the assessment. All assessment points were taken at 1.2m above the floor and 1m away from the façade of openable windows (which would be for ventilation purpose) of rooms of sensitive use. Figure 3.1 illustrates the locations of the selected representative NSRs for road traffic noise impact assessment.

3.5 Assessment Result for Base Case Scenario

- 3.5.1 The predicted road traffic noise levels on the representative NSRs have been assessed for the base case scenario (without direct noise mitigation measures in place) as presented in Appendix 3.2.

3.5.2 The maximum predicted noise level is 69dB(A). No adverse road traffic noise impact on the Proposed Development is anticipated.

3.6 Conclusion

3.6.1 Road traffic noise impact assessment has been carried out for the Proposed Development.

3.6.2 According to the assessment result under base case scenario, no exceedance is found. Therefore, the Proposed Development would not subject to any adverse road traffic noise impact.

4. FIXED NOISE IMPACT ASSESSMENT

4.1 Introduction

- 4.1.1 The aim of this study is to assess potential noise impact arising from nearby fixed noise source within 300m assessment area of the Proposed Development. Practical noise mitigation measures would be recommended, where necessary.

4.2 Assessment Criteria

- 4.2.1 According to the *“Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Spaces or Construction Sites”* (IND-TM) issued under the Noise Control Ordinance (NCO), the airborne noise shall comply with the Acceptable Noise Level (ANL), which depends on the Area Sensitivity Rating (ASR).
- 4.2.2 According to the IND-TM, any NSR shall be assigned with an ASR “C” if it is within 100m of a zone designated as “Industrial” or “Industrial Estate” on a statutory outline zoning plan. It is understood that the area to immediate north and east of the Proposed Development is currently zoned as “Industrial (Group D)”. All sensitive facades of the proposed development are within 100m of “Industrial (Group D)” zone. Therefore, ASR “C” is assigned for all facades.

Table 4.1 Acceptable Noise Levels for Fixed Noise Impact Assessment

Time Period	ANL for ASR “C”, Leq (30 min), dB(A)
Day & Evening (0700 to 2300 hours)	70
Night (2300 to 0700 hours)	60

4.3 Identification of Fixed Noise Sources

- 4.3.1 Desktop review and site surveys have been carried out to identify potential fixed noise sources in the vicinity of the Application Site. The existing fixed noise sources situated within the proposed SPPHD development area are to be ceased and demolished in the future before the operation of the Proposed Development as the tentative completion year for the Proposed Development is one (1) year later than the SPPHD. The fixed noise site surveys focused on remaining area mainly to the east and south of the Application Site.
- 4.3.2 Site surveys were conducted on 09 February, 28 February, 21 March and 01 August 2024. It is confirmed that the surrounding area mainly consists of village houses, site offices and enclosed warehouse, temporary vehicle retail shops/ open storage of unlicensed brand new vehicles, etc.
- 4.3.3 They are not regarded as potential fixed or industrial noise sources, or having any active or noisy operation based on site surveys' observation. Appendix 4.1 shows site survey record.
- 4.3.4 According to site survey, a recycling workshop was found. Figure 4.1 shows its location. Noise measurement was carried out for the purpose to derive the Sound Power Level (SWL) for the recycling workshop. Based on site survey during nighttime, it is observed that there is no operation for the workshop. It is assumed that the recycling workshop would not operate during nighttime.
- 4.3.5 The measured Sound Pressure Level (SPL) for the recycling workshop was 65.7dB(A) at 15m with an equivalent Sound Power Level (SWL) of 97.2dB(A) and adopted in this assessment (see Appendix 4.1).

4.4 Assessment Methodology

- 4.4.1 The potential fixed noise impact arising from the identified noise source in the vicinity has been assessed based on standard acoustic principles with the following formula applied:

$$SPL_{NSR} = SWL_{source} + Corr_{dist} + Corr_{fac}$$

where

SPL_{NSR}	= Predicted Noise Level at Selected Representative NSR
SWL_{source}	= Derived Sound Power Level of the Fixed Noise Source
$Corr_{dist}$	= Distance Correction (-20 x Log (Horizontal Distance between NSR and Source) - 8)
$Corr_{fac}$	= Façade Correction (+3 dB(A))

4.5 Representative Noise Sensitive Receiver

- 4.5.1 Representative NSR which have direct line of sight and shortest horizontal distance with the identified fixed noise source has been selected for the assessment. Should the predicted fixed noise level at this worst affected location be within the acceptable criterion, no unacceptable fixed noise impact on remaining sensitive uses is anticipated.
- 4.5.2 The clubhouse would be served by central air-conditioning and not rely on openable windows for ventilation. Adverse fixed noise impact is not anticipated. No assessment point is assigned to clubhouse.
- 4.5.3 The location of the representative NSRs is presented in Figure 4.1.

4.6 Assessment Result

- 4.6.1 The predicted fixed noise level $Leq(30mins)$ for daytime & evening period is 61dB(A). The result shows that the predicted noise level is in compliance with the assessment criteria of 70dB(A) for day & evening time.

Table 4.2 Predicted Fixed Noise Level

Noise Source ID	Description	SWL, dB(A)	Distance, m	$Corr_{dist}$, dB(A)	$Corr_{fac}$, dB(A)	SPL at NSR F1-13, dB(A)
R01	Recycling Workshop	97.2	27	-36.6	3	60.6

4.7 Conclusion

- 4.7.1 The potential noise impact from fixed sources has been assessed. According to the assessment results, the Proposed Development would not be subject to adverse fixed noise impact.
- 4.7.2 Furthermore, in order to ensure that the fixed noise generated by the Proposed Development would not cause excessive impact to neighbouring noise sensitive uses, the potentially noisy facilities onsite (e.g. ventilation system, plant room etc.) will be designed and installed with adequate noise mitigation measures (e.g. housed indoors, equipped with acoustic louvers) to meet the relevant noise criteria as stipulated in the HKPSG and NCO.

5. CONSTRUCTION PHASE IMPACTS

5.1 Introduction

5.1.1 During the construction phase of the Proposed Development, there may be potential air quality, noise and water quality impacts upon the nearby sensitive receivers such as villages. Waste generation (including possible land contamination) is another consideration. Practicable environmental mitigation measures are recommended to reduce these impacts to acceptable ranges.

5.2 Fugitive Dust and Gaseous Emission Impact

5.2.1 The major air quality impact of concern during the construction phase will be the potential fugitive dust emission. The major dust emission sources during the construction phase of the Proposed Development are expected to arise from construction activities during site formation stage such as:

- Excavation resulting in exposed ground vulnerable to air erosion;
- Earth moving, loading and unloading of excavated material;
- Wind effect on material stockpiling; and
- Vehicle movements on haul roads and over the construction site.

5.2.2 There will be potential impacts from the criteria pollutants (e.g. nitrogen dioxide (NO₂), sulphur dioxide (SO₂), and carbon monoxide (CO)). Emission from diesel trucks for the haulage of materials and construction plants will contain high percentage of smoke particulate and unburned hydrocarbons in comparison with petrol driven vehicles. Ultra-low sulphur diesel (ULSD) with sulphur content not exceeding 0.001% by weight will be used as fuel to minimize SO₂ emission. In all circumstances, the contractor will be required to observe all relevant regulations and maintain all equipment in good condition to avoid any excessive emission. Under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, only approved or exempted non-road mobile machineries (including mobile generator, air compressor, excavator, crawler crane, bulldozer and etc.) with a proper label are allowed to be used in the construction site. In addition, availability of electricity supply during construction of the project will be explored and such requirement will be specified in future contract. In all circumstances, contractor should maximise use of electricity and with least reliance of diesel fuelled equipment (e.g. for electricity powered stationary equipment such as pump instead of using generator).

5.2.3 There are existing and planned residential uses situated in the vicinity from the Application Site and considered as both Air and Noise Sensitive Receivers. Figure 5.1 shows the separation distance between the Application Site and the nearby sensitive receivers.

Table 5.1 Summary of Representative Air and Noise Sensitive Receivers

ID	Description	Type	Approximate Horizontal Distance to the Application Site
SR01	Sha Po Public Housing Development (SPPHD) – Tower 10*	Residential	~10m to the northwest
SR02	Temporary Structure (Village House)	Residential	~29m to the east
SR03	Village House	Residential	~6m to the south

*Tentative in operation in or near 2031

- 5.2.4 The Proposed Development is designed to erect two residential towers of 47 and 49 residential storeys (excluding 1 refuge floor) with 1 storey of basement carpark. Therefore, excavation work is required for the Proposed Development. Demolition work is expected to be minimal for the limited existing structure onsite. It is estimated that about 23,810m³ of excavated material will be generated. Assuming a period of 1 year for demolition, site formation and excavation, about 1 truckload per hour will be generated. In addition, it is noted that SPPHD is planned to the immediate west of the Application Site (see Figure 5.1). According to the EFS Final Report, the tentative site formation works commencement date for SPPHD is year 2025 and the development is tentatively to be completed by year 2031. It is understood that the Proposed Development is tentatively to have construction works commenced in 2030 and completed by year 2035. There is 2 years overlapping of construction time and there will be concurrent construction of the SPPHD and the Proposed Development at the same time according to the tentative schedule. Relative to SPPHD (public housing with 16 residential blocks + GIC use), the scale of the proposed development (2 residential towers) is much smaller. It is estimated that the number of construction machinery operated simultaneously within the Application Site will be no more than 15. To further minimize the exhaust emission from the NRMMS, the future contractors will be required to use approved NRMMS only. Exempted NRMMS shall be avoided. Electrified NRMMS should be deployed as far as practicable. Such requirement will be incorporated into future tender to contractor.
- 5.2.5 In all circumstances, best management practice and mitigation measures are recommended to minimise the air quality impact during construction of the project as recommended below. Due to the close proximity of the Proposed Development and SPPHD, it is recommended that both contractors should have close liaison to avoid any heavy/dusty activities to be taken place at the same time or at locations nearby to minimise the cumulative construction air quality impact. Continuous dust monitoring and periodic audit during construction phase is recommended to monitor the impact and ensure that practical and applicable mitigation measures will be in place. It will be documented in future tender so that contractor will strictly follow. The audit programme will be submitted to representative of the applicant for approval and implemented by the contractor.

Mitigation Measures for Fugitive and Gaseous Emission

- 5.2.6 Fugitive dust and gaseous emission arising from construction activities can be controlled by incorporating proper mitigation measures into work procedures through contractual clauses with reference to EPD's Recommended Pollution Control Clauses for Construction Contracts, where applicable, good site management, and close monitoring by the resident engineers. The contractor shall be required to follow the requirements of the Air Pollution Control (Construction Dust) Regulations for demolition and construction of the project. With the implementation of control measures stipulated under the Air Pollution Control (Construction Dust) Regulation and adoption of good practices, adverse construction air quality impact is not anticipated. Mitigation measures including but not limited to the followings with respect to superstructure construction of a building and hoarding should be implemented as appropriate:
- In the case of the superstructure construction of a building
 - Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting shall be provided to enclose the scaffolding from the ground floor level of the building, or if a canopy is provided at the first floor level, from the first floor level, up to the highest level of the scaffolding;

- Any skip hoist for material transport shall be totally enclosed by impervious sheeting; and
- Any relevant requirements set out in Parts III and IV of Air Pollution Control (Construction Dust) Regulations shall be met.
- Except for road opening or resurfacing work, or for construction work carried out in a construction site that is completely paved or completely covered with hardcore
 - Vehicle washing facilities including a high pressure water jet shall be provided at every discernible or designated vehicle exit point;
 - The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point shall be paved with concrete, bituminous materials or hardcores;
 - Where a site boundary adjoins nearby air sensitive uses, a road, street, service lane or other area accessible to the public, high hoarding of not less than 2.4m high from ground level shall be provided along the entire length of that portion of the site boundary except for a site entrance or exit. In addition, as nearest air sensitive uses are identified nearby (i.e. SR01, SR02 and SR03), higher hoarding (i.e. 3.5m high from ground level) is recommended along northwest, east and south site boundary.

5.2.7 Other recommended mitigation measures are described below.

General Site Management

- 5.2.8 Appropriate working methods should be devised and arranged to minimise air emissions and to ensure any installed control system and/or measures are operated and/or implemented in accordance with their design merits. No free falling of construction debris should be allowed, which should be let down by hoist or enclosed tunnel to the ground.
- 5.2.9 A high standard of housekeeping shall be maintained. Any piles of materials accumulated on or around the work areas shall be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas shall be carried out in a manner that does not generate fugitive dust emissions. Prior to cleaning, the materials should be handled properly to prevent air emission. Any exposed earth shall be properly treated by compacting or hydro seeding, within 6 months after the last construction activity.
- 5.2.10 Frequent mist/ water spraying should be applied on dusty areas and among dusty activities such as excavation work. The frequency of spraying will depend upon local conditions such as rainfall, temperature, wind speed and humidity. The amount of water spraying should be just enough to dampen the material without over-watering which could result in surface water runoff.
- 5.2.11 It is also recommended that the environmental officer of the contractor should conduct continuous dust monitoring and regular audit to monitor the impact and ensure that all practical mitigation measures are properly implemented onsite and there is no excessive air emission.

Vehicles and Unpaved Site Roads

- 5.2.12 Dust emission from unpaved roads comes predominantly from travelling of vehicles. Areas within the site where there are regular vehicle movements should have an approved hard surface. Speed controls at an upper limit of 10km/hr should be imposed and their movements should be confined to designed roadways within the site. All dusty vehicle loads should have side and tail boards covered by tarpaulin extending at

least 300mm over the edges of the side and tail boards. Wheel-wash troughs and hoses should be provided at exit points of the site.

Material Stockpiling and Handling

- 5.2.13 The amount of stockpiling should be minimised where possible and located away from sensitive receivers. Similarly, heavy /dusty activities and machinery close to ASRs should be avoided where practicable. Construction material or debris should be covered and stored inside enclosed areas. Other control measures such as enclosed or semi-enclosed windboard should be used, where applicable, to minimise dust emission. Regular watering is needed at areas such as storage piles, where there could be potential dust emission.

Maximising Use of Electric Power Supply

- 5.2.14 Only approved Non-Road Mobile Machinery (NRMM) should be used for construction work with respect to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation. Exempted NRMMs shall be avoided. Electrified NRMMs should be deployed as far as practicable. In addition, electric power supply shall be provided for onsite machinery as far as practicable to minimize PM and gaseous emissions.

5.3 Construction Noise Impact

- 5.3.1 During the construction phase of the Proposed Development, major noise impacts would arise from piling works, operation of Powered Mechanical Equipment (PME), and construction-related traffic.

Construction Noise Criteria

- 5.3.2 Construction noise is controlled under the Noise Control Ordinance (NCO) which prohibits the use of powered mechanical equipment (PME) during the restricted hours (7 p.m. to 7 a.m. on normal weekdays and any time on a public holiday, including Sunday) without a valid Construction Noise Permit (CNP) from the Authority. The criteria and procedures for issuing such a permit are specified in the "Technical Memorandum on Noise From Construction Works Other than Percussive Piling" (TM1). While there is no planned construction works to be carried out during the restricted hours, TM1 should be followed in case there is any need to carry out works in such time period in future.
- 5.3.3 With effect from 1 November 96, the use of specified powered mechanical equipment (SPME) for carrying out construction work other than percussive piling and/ or the carrying out of prescribed construction work (PCW) within a designated area are also brought under control. The relevant technical details are provided in the "Technical Memorandum on Noise from Construction Work in Designated Areas" (TM2).
- 5.3.4 Percussive piling is controlled similarly by a construction noise permit system and described in the NCO and the "Technical Memorandum On Noise From Percussive Piling" (TM3) which restrict the number of hours during which piling can be conducted. Percussive piling is prohibited between 7 p.m. and 7 a.m. and on holidays (including Sundays). Percussive piling during the daytime (i.e. between 7 a.m. and 7 p.m. on any day not being a holiday) may be carried out in accordance with the permitted hours and other conditions under a valid construction noise permit.
- 5.3.5 For construction works other than percussive piling, although TM1 does not provide control over daytime construction activities, noise limits as shown in below Table are set out in the "Practice Note for Professional Persons Environmental Consultative Committee" (ProPECC) PN 1/24 "Minimizing Noise from Construction Activities" issued by EPD.

Table 5.2 Noise Limit for Daytime Construction Activities

NSR	0700 to 1900 Hours on Any Day Not Being a Sunday or General Holiday, Leq (30 min), dB(A)
All domestic premises Temporary housing accommodation Hostels Convalescences homes Homes for the aged	75
Places of public worship Courts of law Hospitals and medical clinics	70
Educational institutions (including kindergartens and nurseries)	70 (65 during examination)

Noise Mitigation Measures

- 5.3.6 Sufficient noise mitigation measures should be introduced to alleviate potential noise impacts on nearby NSRs. The Contractor(s) will be required under the contract to ensure regular maintenance of all plant and equipment, and that noise generation at source would be minimized and practicable noise mitigation measures would be in use. The Contractor(s) will be required to adopt quiet type construction plants (e.g. EPD's quality powered mechanical equipment (QPME) inventory), wherever practicable. Similarly, quieter method other than percussive piling will be adopted as far as practicable for any piling works subject to ground investigation result (which usually dictates the piling method). Movable noise barriers will also be erected around noisy plants in order to minimize noise generation at source. With these measures in place noise generation due to construction activities would be minimized.
- 5.3.7 The following general noise mitigation measures are recommended for implementation:
- Application of properly designed silencers, mufflers, acoustically dampened panels and acoustic sheds or shields, etc.;
 - Use of electric-powered equipment where applicable instead of diesel-powered or pneumatic-powered equipment;
 - Erecting higher hoarding along site boundary in the vicinity of noise sensitive receivers, and noise enclosures/ movable noise barriers around noisy plants;
 - Only well-maintained plants should be operated on-site;
 - Plants should be serviced regularly during the construction programme;
 - Noisy activities can be scheduled to minimize exposure of nearby NSRs to high levels of construction noise. For example, noisy activities can be scheduled for midday or at times coinciding with periods of high background noise;
 - Noisy equipment such as emergency generators shall always be sited as far away as possible from noise sensitive receivers;
 - Location of noise emitting plants at maximum possible distances from sensitive receivers;
 - Contractual clauses for construction works; and
 - Schedule of noisy operations during non-restricted hours where possible.

- 5.3.8 The above-mentioned noise mitigation measures, and all other relevant measures in “Recommended Pollution Control Clauses for Construction Contracts” from EPD website and ProPECC PN 1/24 will be included in the contractual clauses for the contractor(s) to follow and implement during the construction stage. Furthermore, the Applicant will be recommended to specify the quieter construction equipment/ methods in the construction contract to adopt through the preparation of a Construction Noise Management Plan (CNMP) by the successful tenderer with reference to ProPECC PN 1/24. With these measures in place, construction noise due to the Proposed Development can be minimized, and no significant noise impact is anticipated.

5.4 Water Quality Impact

Relevant Legislation, Standards and Guidelines

5.4.1 Relevant legislations include:

- Water Pollution Control Ordinance (Cap. 358); and
- Hong Kong Planning Standards and Guidelines.

5.4.2 Other relevant guidelines include:

- Water Supplies Department (WSD) Water Quality Criteria;
- Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS);
- Professional Persons Environmental Consultative Committee Practice Note 2/24 “Construction Site Drainage” (ProPECC PN 2/24);
- Professional Persons Environmental Consultative Committee Practice Note 1/23 “Drainage Plans subject to Comment by the Environmental Protection Department” (ProPECC PN 1/23); and
- Sewerage Manual (SM) and the Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF).
- Environmental, Transport and Works Bureau (ETWB) Technical Circular (Works) No. 5/2005 Protection of natural streams/rivers from adverse impacts arising from construction works
- Drainage Services Department (DSD) Technical Circular and Practice Notes
- EPD Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (version 1.0) (Report No. EPD/TP 1/05)

Source of Construction Wastewater

- 5.4.3 Construction activities including site clearance and formation, foundation work (piling), excavation and basement construction, and superstructure construction, etc. would inevitably have the potential to generate wastewater and affect the nearby water quality. Works should be carried out in such a manner so as to minimise significant impacts on local water bodies. Activities that are likely to cause water pollution include:
- Construction runoff and drainage;
 - Sewage effluent from the site; and
 - Chemical spillage, e.g. oil, diesel, solvents etc.

Construction runoff and drainage

Construction runoff contains increased loads of sediments, other suspended solids and contaminants. The discharge of uncontrolled construction runoff could be potential blockage of drainage channels and increase suspended solids and turbidity near water bodies of project site. The pH value of the water system could be changed from the release of contaminants and result in toxic effect to water biota.

Potential sources of pollution include runoff and erosion from the site surfaces, drainage channels; bentonite slurries and other grouting materials and drainage from dust suppression sprays, fuel, oil and lubricants from construction vehicles and other equipment.

Sewage effluent from the site

Sewage effluent could be potential generated from eating areas, temporary site facilities e.g. toilets and waste disposal area for on-site construction workforce. The sewage effluent is characterized by high levels of biochemical oxygen demand (BOD), ammonia, E. coli and some oil / grease.

Chemical spillage, e.g. oil, diesel, solvents etc

Chemical spillage could be caused by some general construction works to contaminate surface soils, e.g. oil, diesel, solvents etc. The contaminated soil may be washed away through run-off from construction site and enter nearby stormwater drains, thus leading to negative water quality impact.

- 5.4.4 Water sensitive receivers are identified in the surrounding of the Proposed Development (see Figure 5.2). They include some scattered small ponds, wetland provided by Park YOHO development. There is no watercourse found within the Application Site. Yet, there are also various surface drain serving village developments and collecting surface runoff. One surface drain is found just outside and along a portion of southern boundary of the Application Site. Precautionary measures should be incorporated to avoid and minimise potential water quality impact on the water sensitive receivers. For example, hoarding immediate to the surface drain outside site is to be sealed.

Table 5.3 Summary of Water Sensitive Receivers in the Surroundings

WSR	Nature	Approximate Shortest Horizontal Separation from Nearest Site Boundary
WSR01	Natural or Channelised Watercourse	~118m
WSR01a	Open Drain	0m
WSR02	Pond	~74m
WSR03	Wetland	~364m

Mitigation Measures

- 5.4.5 The good practice given in the Practice Notes for Professional Persons on "Construction Site Drainage" (ProPECC PN 2/24) in controlling water pollution at construction site shall be implemented during the construction phase of the Proposed Development. Soil erosion from the construction site can be minimised through good on-site management practices by implementing viable erosion control measures which should be incorporated in contract clauses. The main practices provided in the above-mentioned document (i.e. ProPECC PN 2/24) are also summarized in the following paragraphs

which should be enforced to prevent unacceptable construction stage impacts and for compliance with the statutory criteria.

Construction Site Runoff

- Exposed soil surfaces should be protected from rainfall through, for example, by covering temporarily exposed slope surfaces or stockpiles with tarpaulin and protect temporary access roads by crushed stone or gravel;
- Exposed soil areas should be minimised to reduce the potential for increased siltation and contamination of runoff;
- Minimise the time that soil surfaces are exposed;
- Slow down water run-off flowing across exposed soil surfaces;
- Channels, earth bunds or sand bag barriers should be provided on site to properly direct surface runoff through drainage systems;
- Oil interceptors are also recommended to be provided for stormwater drains near plant maintenance/ repair areas, where necessary.
- Manholes (including newly constructed ones) should be adequately covered or temporarily sealed so as to prevent slit, construction materials or debris from getting into the drainage system;
- Construction works should be programmed to minimise soil excavation works where practicable during rainy conditions;
- Drainage facilities must be adequate for the controlled release of storm flows;
- Sedimentation basins and sand traps designed in accordance with the requirements of ProPECC Note PN 2/24 should be installed at the construction site for collecting surface runoff. Perimeter channels at site boundaries should be provided where necessary to intercept surface runoff from outside the site. Silt removal facilities, channels and manholes should be maintained and deposited silt and grit should be removed regularly;
- Hoarding immediate to any water sensitive receiver is to be sealed to minimise possibility of any surface water discharge to it.
- There should be no direct discharge without treatment of construction site runoff into the nearby streams and public drains;
- The Contractor shall prepare a construction site drainage management plan with details of the construction phase drainage system proposed to be constructed; discharge location(s); and screening facilities; and
- The Contractor(s) shall apply for a discharge licence under the WPCO and the discharge shall comply with the terms and conditions of the licence throughout the construction phase.
- Construction works should be arranged so that there should be no disturbance to water quality at the nearby stream. Construction site runoff should be intercepted by drains so that there will be no direct discharge without treatment into the nearby stream and other sensitive areas.

Wastewater from Construction Site

- Sewage generated from the construction workforce should be contained by chemical toilets before connection to public foul sewer can be provided. The number of chemical toilets required would be subject to the capacity of the chemical toilets, and contractor's practices/ work programme. The Contractor(s)

will be required to provide an estimation on the amount of sewage to be generated and to provide sufficient number of chemical toilets for construction workers. The chemical toilets should be serviced and cleaned by a specialist contractor at regular intervals. No discharge of sewage into nearby environment will be allowed during construction stage. Such requirements will be incorporated into relevant contractual clauses of this Proposed Development for proper implementation;

- Foul water from canteens on-site, if any, should also be contained by chemical toilets before connection to public foul sewer can be provided;
- Vehicle wheel washing facilities should be provided at every site exit such that mud, debris, etc. deposited onto the vehicle wheels or body can be washed off before leaving the site area;
- Section of construction road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains; and
- If bentonite is used, bentonite slurry should be reconditioned and reused as far as practicable. Spent bentonite should be kept in a separate slurry collection system for disposal at a marine spoil grounds subject to obtaining a marine dumping licence from EPD. If used bentonite slurry is to be disposed of through public drainage system, it should be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards in accordance with ProPECC PN 2/24.

Chemical Spillage

- Spillage of fuel oils or other polluting fluids should be prevented at source. It is recommended that all stocks should be stored inside proper containers and sited on sealed areas, preferably surrounded by berms;
- Regular site inspections to ensure the proper implementation of the above measures shall be carried out.
- A chemical waste producer must be registered by the Contractor if chemical waste would be produced from the construction site.
- Control of chemical waste shall observe and comply with the Waste Disposal Ordinance (Cap. 354) and its subsidiary regulations, particularly the Waste Disposal (Chemical Waste) (General) Regulation.
- Any maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided.
- Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should be undertaken with the areas appropriately equipped to control these discharges.

5.5 Construction Waste Disposal

Legislation

- 5.5.1 The principal legislation controlling waste materials in Hong Kong is the Waste Disposal Ordinance (WDO) (Cap. 354) and its subsidiary regulations including Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) and Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Other relevant ordinances include Land (Miscellaneous Provisions) Ordinance (Cap. 28) and Public Health and Municipal Services Ordinance (Cap 132) – Public Cleansing and Prevention of Nuisances

Regulation. Other relevant guidelines which cover how the applicant and contractor should comply with the regulations are as follows:

- Environmental Guidelines for Planning in Hong Kong (2022), Hong Kong Planning Standards and Guidelines, Hong Kong Government;
- Work Branch Technical Circular (WBTC) No. 2/93, Public Dumps, Works Branch, Hong Kong Government;
- WBTC No. 2/93B, Public Filling Facilities, Works Branch, Hong Kong Government;
- WBTC No. 12/2000, Fill Management; Works Bureau, Hong Kong SAR Government;
- DEVB TCW No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness. Development Bureau, Hong Kong SAR Government;
- WBTC No. 12/2002, Specification Facilitating the Use of Recycled Aggregates. Works Bureau, Hong Kong SAR Government;
- DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials, Development Bureau, Hong Kong SAR Government;
- ETWB TC No. 19/2005, Environmental Management on Construction Sites, Hong Kong SAR Government;
- Practice Note for Authorized Persons and Registered Structural Engineers – Construction and Demolition Waste (PNAP ADV-19, also known as PN for AR&RSE No. 243);
- Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (2023), Environmental Protection Department, Hong Kong SAR Government;
- DEVB TCW No. 9/2011, Enhanced Control Measures for Management of Public Fill;
- A Guide to the Registration of Chemical Waste Producers;
- A Guide to the Chemical Waste Control Scheme;
- Monitoring of Solid Waste in Hong Kong 2022; and
- Guidance Notes on Tree Preservation and Removal Proposal for Building Development in Private Projects – Compliance with Tree Preservation Clause under Lease, Lands Department, Hong Kong SAR Government.

Waste Generation

5.5.2 Construction activities for the Proposed Development will generate waste materials requiring appropriate management and disposal. Likely range of waste types includes:

- C&D materials due to excavation, demolition and site clearance;
- General refuse generated by the workforce; and
- Scrap metal, effluent, other chemicals and oily wastes from construction activities and equipment maintenance.

C&D Materials

5.5.3 C&D materials comprise mainly of unwanted materials, including surplus materials arising from excavations that are generated from the works (e.g. site clearance, demolition works of substructure, site formation works, excavation work for basement). Inert soft C&D materials comprise of soil, sand, clay, slurry, etc., while hard C&D materials comprise of crushed concrete, asphalt, rock, etc. The amount of non-inert C&D materials generated during site clearance would be minor (as there is

little vegetation at the Application Site). C&D materials may comprise different types of materials, including:

- Non-inert C&D materials (e.g. bamboo, timber, paper, metal, glass, plastic, packaging wastes, etc.) decompose or are not suitable for land reclamation and should be reused or recycled as far as possible. Those non-inert C&D materials that cannot be reused or recycled should be disposed of at landfill as a last resort.
- Inert C&D materials (e.g. soil, rock debris, rubble earth, concrete, etc.) do not decompose and are suitable for reuse as filling materials for land reclamation and site formation. Inert C&D materials could be reused on-site as filling materials. Those inert C&D materials that cannot be reused should be delivered to Public Fill Reception Facilities.

- 5.5.4 The general waste management strategy is to avoid waste generation in the first place. If that is unavoidable, source reduction and segregation should be exercised as far as practicable and at the same time, recycling and reuse should be adopted to salvage as much as possible all the recyclable and reusable materials.

Waste Impact

- 5.5.5 Without any handling arrangement/ control measures in place, the storage, handling and disposal of general refuse have the potential to give rise to some environmental impacts. These include odour and hygienic problems when waste is not collected frequently, windblown litter, water quality impacts if waste enters water bodies and visual impact. Chemical wastes arising during the construction phase may pose environmental, health and safety hazards if not properly labelled, packaged, handled, stored and disposed of in an appropriate manner. C&D material of different types may be mixed together, thus not possible to recycle C&D material subsequently and increase burden to landfill facilities.

Waste Management Hierarchy

- 5.5.6 The various waste management options are categorised in terms of preference from an environmental viewpoint. The options considered to be most preferable have the least environmental impacts and are more sustainable in the long term. The hierarchy is as follows. The waste management strategy is to avoid waste generation in the first place (i.e. in descending preference of the list below).
- Avoidance and reduction;
 - Reuse of materials;
 - Recovery and recycling; and
 - Treatment and disposal.

Construction Waste Disposal Measures

- 5.5.7 On-site sorting of construction wastes will be recommended. On-site sorting can be achieved by avoiding the generation of "mixed waste" through good site control.
- 5.5.8 Waste generated by construction activities should be sorted into inert C&D materials and non-inert C&D materials. The inert C&D materials which comprise soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt shall be reused in earth filling, reclamation or site formation works. The inert C&D materials could be reused onsite and the remaining will be delivered to public fill reception facilities. The non-inert C&D materials which comprises metal, timber, paper, glass, junk and general garbage shall be reused or recycled and, as the last resort, disposal of at landfills.

- 5.5.9 It is understood that yard waste will be anticipated from construction activities, mainly from site clearance. They will be handled in accordance with the waste management hierarchy. Relevant guidelines from EPD and Y Park (https://www.epd.gov.hk/epd/english/environmentinhk/waste/manage_facility/ypark.html & <https://www.ypark.hk/zh-hant/>) will be taken into account when handling yard waste, where applicable. To minimize the generation of yard waste, it is recommended to:
- 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;
 - Segregate various types of yard waste and shred wood to facilitate reuse and recycling;
 - Reuse yard waste on-site for a variety of purposes (e.g., decomposition and composting, recreational and decorative uses, and mulching in planting areas, etc.); and
 - Identify recycling options (e.g. delivery to Y-park) for yard waste that cannot be directly reused on-site.
- 5.5.10 Where yard waste generation is unavoidable, sorting of yard waste for recycling and reuse on site will be the priority. Yard waste will be separated from C&D material to facilitate recycling, such as delivering them to Y-park so as to minimize the quantity of waste to be disposed at landfill site. Where appropriate, the Contractor should be responsible to cut and shred the yard waste in order to meet the collection requirement of the recycling outlet for processing. Disposal of yard waste directly at landfills will only be regarded as the last resort, when no alternatives are available.
- 5.5.11 For general refuse (including food waste, paper, plastic bottles and aluminium cans, etc.), mitigation measures should include provision of a collection area where waste can be sorted, stored and loaded prior to removal from the site. Recyclable materials (i.e. paper, plastic bottles and aluminium cans) will be separated for recycling, in order to reduce the amount of general refuse to be disposed of at landfill.
- 5.5.12 The removal of general refuse from the site will be arranged on a daily basis or at least on every second day to minimize any potential odour impacts. Disposal of general refuse is recommended before foreseeable inclement weather such as typhoon or heavy rain.
- 5.5.13 The Applicant and its contractor will consider if recycling of food waste is practicable during the construction phase.
- 5.5.14 Non-recyclable waste will be disposed of at landfills.
- 5.5.15 It is estimated that about 25,600m³ of inert C&D material and 2,500m³ of non-inert C&D material will be generated during the course of construction (including demolition). Adequate areas for sorting and storage of segregated materials should be provided onsite. Construction wastes shall be sorted, with the inert C&D materials broken up into small pieces for delivering at public fill reception facility, and the non-inert C&D materials should be disposed of at landfill.
- 5.5.16 Chemical and oily wastes generated from the construction activities, vehicle and plant maintenance and oil interceptors should be disposed of as chemical waste in strict compliance with the Waste Disposal (Chemical Waste) (General) Regulation. Any person who produces or causes to produce chemical waste is required to register with EPD. The Applicant and its contractor will duly follow the requirement and register with EPD as a chemical waste producer.

- 5.5.17 Waste disposal from construction site is subject to control under the Waste Disposal Ordinance.
- 5.5.18 To estimate the general refuse generated during construction phase, an assumption of 60 workers per day with 0.65kg per worker per day has been made. Table 5.4 presents the estimation of waste generated during construction phase.

Table 5.4 Estimated Quantities of Waste during Construction Phase

Waste Material	Estimated Waste Generation	Proposed Handling Method and Destination
Inert C&D Material	~25,600 m ³	~0.5% (i.e. 1,300m ³) would be reused on-site and the remaining (i.e. 99.5% or ~24,300m ³) would be delivered offsite to public fill reception facilities (Tuen Mun 38 Fill Bank)
Non-Inert C&D Material	~2,500 m ³	Recyclables would be segregated before sending to recyclers; Non-recyclables to landfill (WENT landfill) Yard waste that cannot be reused onsite will be delivered to Y-Park
General Refuse	~39 kg per day	Recyclables to recyclers; Non-recyclables to landfill (WENT landfill)
Chemical Waste	Anticipated to be limited (around some hundred litres at most)	To be collected by licensed chemical waste collectors and deliver to Chemical Waste Treatment Centre

Mitigation Measures during Construction Phase

- 5.5.19 The following section describes the best management practices in construction site to avoid or further reduce the potential environmental impacts associated with the handling, collection and disposal of construction and chemical wastes arising from the construction of the Proposed Development.
- 5.5.20 The Contractor should prepare and submit a Waste Management Plan (WMP) to Architect/Engineer for approval before the commencement of any construction works based on the requirement of PNAP ADV-19. The WMP should include designation of areas for the segregation and temporary storage of materials for future use or recycling, the hierarchy for waste management on and off-site as well as a complete list of mitigation measures for handling excavated materials.
- 5.5.21 It will be the contractor's responsibility to ensure that only reputable licensed waste collectors are used and that appropriate measures to reduce adverse impacts, including windblown litter and dust from the transportation of these wastes, are employed. In addition, the contractor must ensure that all the necessary permits or licences required under the Waste Disposal Ordinance are obtained for the construction phase.
- 5.5.22 Avoidance of waste can be achieved through careful planning of works method and material consumption before ordering of materials. Material should be properly stored and protected to reduce damage and contamination to reduce waste generation as well. Non-timber formwork, or used timber, instead of virgin timber, should be adopted where possible.
- 5.5.23 If waste is unavoidable, source reduction and segregation should be exercised as far as practicable and at the same time, recycling and reuse should be adopted to salvage as much as possible all the recyclable and reusable materials.

- 5.5.24 The Applicant and its contractor should consider if any yard waste is appropriate to be sent to the Yard Waste Recycling Centre in Y-Park for recycling prior to disposal at the designated landfill site.
- 5.5.25 Used timber in good condition will be reused in other contract and construction site of the contractor to reduce the amount of timber wastes.
- 5.5.26 Surplus inert construction material and other non-inert C&D materials which comprises metal, timber, paper, glass, etc. shall be recycled. Recycle bins should be provided onsite and workers should be trained and encouraged to segregate recyclable and non-recyclable wastes upon disposal.
- 5.5.27 Any unused chemicals and those with remaining functional capacity should be recycled as far as possible.
- 5.5.28 The Applicant and its contractor will consider if “All dump trucks engaged on-site for delivery of inert and non-inert C&D material from the site to the designated disposal location, including PFRFs, landfill etc., should be equipped with GPS or equivalent system for tracking and monitoring of their travel routings and parking locations by the Contractor to prohibit illegal dumping and landfilling of materials” and “The data collected by GPS or equivalent system should be recorded properly for checking and analysis the travel routing and parking locations of dump truck engaged on site” are appropriate in the construction phase.

5.6 Land Contamination Review

- 5.6.1 The Application Site is located at Fung Kat Heung, Yuen Long. It is currently used as an open carpark.

Historic and Current Land Uses

- 5.6.2 Historic aerial photos taken in the year 1945, 1963, 1974, 1980, 1994, 1997, 2005, 2009, 2015, 2019, and 2022 are shown in Appendix 5.1 to present the land use status (Table 5.5 also refers).
- 5.6.3 The Application Site was a farmland in year 1945. In year 1963, the western portion had been excavated, while the eastern portion remained the same. The excavated area became two (2) ponds in year 1974. From year 1980 to 1994, only one (1) pond remained and a soy sauce factory namely Yuet Heung Yuen Soy & Sauce Factory (粵香園醬油廠) was established. The Application Site was then become vacant in year 1997. The soy sauce factory was demolished and the site was paved with a strip of plantation located at the northeastern corner. From year 1997 to 2015, the Application Site was vacant and gradually covered by plantation. From year 2019 till now, the Application Site has been paved and formed part of open vehicle parking area.

Table 5.5 Land Use Summary on the Application Site

Period / Year	Land Use / Description	Owner / Occupier	Source of Information	Off-site Property Affected?
1945	The Application Site was a farmland.	No information available	Aerial Photos from Lands Department	No The abutting access road to the east and south is well paved with concrete. There is also a solid boundary wall erected between the access road and the Application Site. Potential chemical spillage would be screened off. No land contamination issue is considered from the operation of nearby industrial/ commercial operation.
1963 to 1974	In year 1963, the eastern portion of the site remained the same, while the western portion had been excavated. In year 1974, the excavated area became 2 ponds.	No information available	Aerial Photos and Topographic Map from Lands Department	
1980	Only 1 pond remained and a soy sauce factory namely Yuet Heung Yuen Soy & Sauce Factory (粵香園醬油廠) was established at the Application Site.	No information available	Aerial Photos and Topographic Map from Lands Department	
1994	No change in land use comparing to year 1980.	No information available	Aerial Photos from Lands Department	
1997	The soy sauce factory was demolished and the pond was filled. The site was paved with a strip of plantation at the northeastern corner.	No information available	Aerial Photos from Lands Department	
2005 to 2015	The Application Site was gradually covered by plantation.	No information available	Aerial Photos from Lands Department	
2019	The Application Site was paved and used as an open car park.	• Applicant • Third Party • Tenant	Aerial Photos from Lands Department	
2022	No change in land use comparing to year 2019.	• Applicant • Third Party • Tenant	Aerial Photos from Lands Department	

Information from Government Departments

- 5.6.4 Apart from the historic aerial photos, the following Hong Kong Special Administration Region (HKSAR) Government Departments have been enquired on the latest update on the availability of land use status and records of land contamination and/or spillage of the Application Site. The summary of correspondence is tabulated in Table 5.6 below. Copy of letters which the Consultant sent to various Government Departments and relevant replies are shown in Appendix 5.2.
- 5.6.5 Building Records Access and Viewing On-line (BRAVO) of Building Departments (BD) was visited on 01 March 2024 to obtain records for completed private buildings. There are neither records of building, structure, drainage, alteration & additions, site formation, minor works nor any existing building available at the Application Site. The captured screen of BRAVO is provided in Appendix 5.3.
- 5.6.6 Enquiry letter was sent to Planning Department (PlanD) on 01 February 2024 and no reply has been received. The Consultant has visited the Town Planning Board Statutory Planning Portal 3 to obtain record for land zoning.
- 5.6.7 As advised by Environmental Protection Department (EPD), the Consultant visited the territory-wide register of chemical waste producers (CWPs) maintained at the Territory Control Office. The register record as of 13 October 2023 has confirmed that there is no CWP at the Application Site.
- 5.6.8 As advised by Fire Service Department (FSD), neither records of dangerous goods license, fire incidents nor incidents of spillage or leakage of dangerous goods was found at the Application Site.

Table 5.6 Enquires and Responses on Land Contamination Related
Records in the Application Site

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
CKHYLFKHEI00_0_0003L.24	Environmental Protection Department	()EP910/E6/1	07/02/2024	There is no record of chemical spillage accident and submission relating to land contamination assessment at the Subject Site in the past 3 years. A visit to the Territorial Control Office for chemical waste producer registry inspection was performed. According to the register record as of 13 October 2023, no valid/ invalid CWP is found at the Application Site.

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
CKHYLFKHEI00_0_0002L.24	Planning Department	-	-	Enquiry letter was on 01 February 2024 and no reply has been received. The Consultant has visited the Town Planning Board Statutory Planning Portal 3 to obtain record for land zoning. The website as of 14 October 2024 has confirmed that the Application Site falls within areas zoned "Industrial (Group D) (I(D))", "Residential (Group A) (R(A))" and Agriculture ("AGR") zone on the Approved Kam Tin North Outline Zoning Plan OZP (No. S/YL-KTN/11).
CKHYLFKHEI00_0_0004L.24	Fire Services Department	(205) in FSD GR 6-5/4 R Pt.51	05/03/2024	Neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found at the Application Site.
CKHYLFKHEI00_0_0005L.24	Lands Department	(2) in DYOYL 23/MS/2024	28/02/2024	DLO is not responsible for handling incidents, activities and accidents arising from environmental issues in private lots. Topographic Map available from Lands Department was reviewed. The Application Site was occupied by the Yuet Heung Yuen Soy & Sauce Factory from year 1978 to 1994. The soy sauce factory was demolished and the site was then paved since year 1997. From 1997 to 2019, the site was gradually covered by plantation. From year 2019 to 2024, the Application Site was paved and used as an open car park. Topographic Map records generally tally with observations in aerial photos.

Discussion and Site Observation

- 5.6.9 Based on the above, the desktop review of historic information indicates that the Application Site was a farmland in general until year 1980. Major changes of land use status in area was occurred around year 1980, 1997 and 2019. The Yuet Heung Yuen Soy & Sauce Factory was established around year 1980. It was later demolished in year 1997. Since year 2019, the Application Site was paved and became an open car park.
- 5.6.10 Site visit was conducted on 28 February 2024. It was observed that the Application Site was used as open vehicle parking. No garage nor workshop was observed onsite. The ground was well paved. Site walkover checklist and photo records were shown in Appendix 5.4 and Appendix 5.5 respectively. There was no sign obvious/ suspected contamination such as oil staining, abnormal odour, distress vegetation, dangerous goods storage and/ or chemical storage.
- 5.6.11 It is therefore considered that the risk of land contamination problem arising from the historical and current use is unlikely. Further investigation of potential land contamination problem is not considered necessary.
- 5.7 Conclusion
- 5.7.1 Potential environmental impacts arising from construction activities of the Proposed Development, including air quality, construction wastewater, noise and waste impacts have been qualitatively assessed. Potential environmental impacts are anticipated to be acceptable with the implementation of effective environmental mitigation measures. In conclusion, it is envisaged that construction phase environmental impacts arising from the Proposed Development would be acceptable.
- 5.7.2 According to the historical and existing use observed in site survey, the risk of land contamination problem is unlikely. Further investigation of potential land contamination problem is not considered necessary.

6. OVERALL SUMMARY

- 6.1.1 An environmental assessment has been conducted for the Proposed Development to address the potential air quality, environmental noise, construction phase environmental impact.
- 6.1.2 There is no air sensitive use including openable window, fresh air intake and recreational uses in open space within the recommended buffer zone from HKPSG. Therefore, no adverse air quality impact due to vehicular emission is anticipated. Two (2) chimneys were identified at a nearby lard boiling factory during site survey within 200m of the Application Site. No operation was observed at the lard boiling factory and the chimneys are therefore considered no longer in use. No adverse air quality impact due to industrial or chimney emission is anticipated. Several potential odour sources (i.e. lard boiling factory, Miu Kwok Monastery and recycling workshop) have been identified in the vicinity. According to the observations from site surveys and the reply from ECD section of EPD, no adverse odour impact to the Proposed Development is anticipated. An onsite sewage treatment plant is proposed for the Application Site as a fallback option from sewerage point of view. With the implementation of the recommended mitigation measures, no adverse odour impact would be generated to the nearby ASRs.
- 6.1.3 Road traffic noise impact assessment has been carried out for the Proposed Development. According to the predicted results, no unacceptable road traffic noise impact due to surrounding roads on the Proposed Development is anticipated. No noise mitigation is considered necessary.
- 6.1.4 Fixed noise impact assessment has also been conducted. The predicted noise levels of representative NSRs would comply with the criteria as stipulated in NCO. It can be concluded that the Proposed Development would not be subject to adverse fixed noise impact. On the other hand, any potentially noisy equipment of the Proposed Development will be designed and installed with adequate noise mitigation measures to comply with the HKPSG standard and NCO.
- 6.1.5 Potential environmental impacts arising from construction activities of the Proposed Development, including air quality, construction wastewater, noise and waste impacts have been qualitatively assessed. Potential environmental impacts are anticipated to be insignificant with the implementation of effective environmental mitigation measures.
- 6.1.6 According to the historical and existing land use observed in site survey, the risk of land contamination is unlikely. Further investigation of potential land contamination problem is not considered necessary.
- 6.1.7 No insurmountable environmental noise, air quality, water quality impact and construction phase environmental impact is anticipated with the recommended environmental mitigation measures properly implemented. The environmental acceptability of the Proposed Development is demonstrated in this study.

Figures

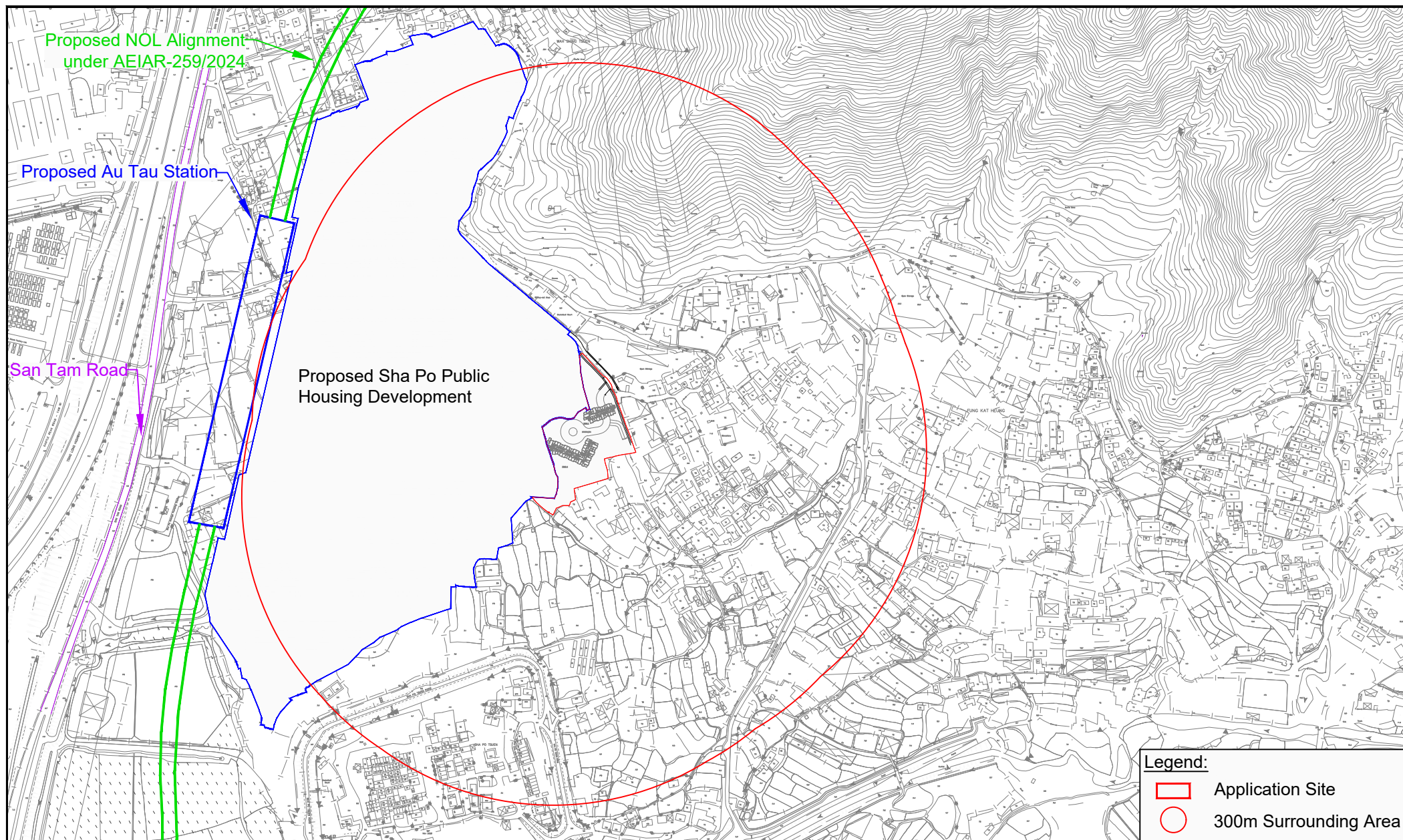


Figure: 1.1

Title: Location of the Application Site and Its Environs

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

RAMBOLL

Drawn by: BF

Checked by: CC

Rev.: 1.4

Date: Oct 2025

Remarks

No air sensitive uses, including openable windows, fresh air intake and recreational uses in open space shall be located within the buffer zone.

Remarks: For the part of building falling within the buffer zone, there is no air sensitive use, including openable windows, fresh air intake and recreational uses in open space.

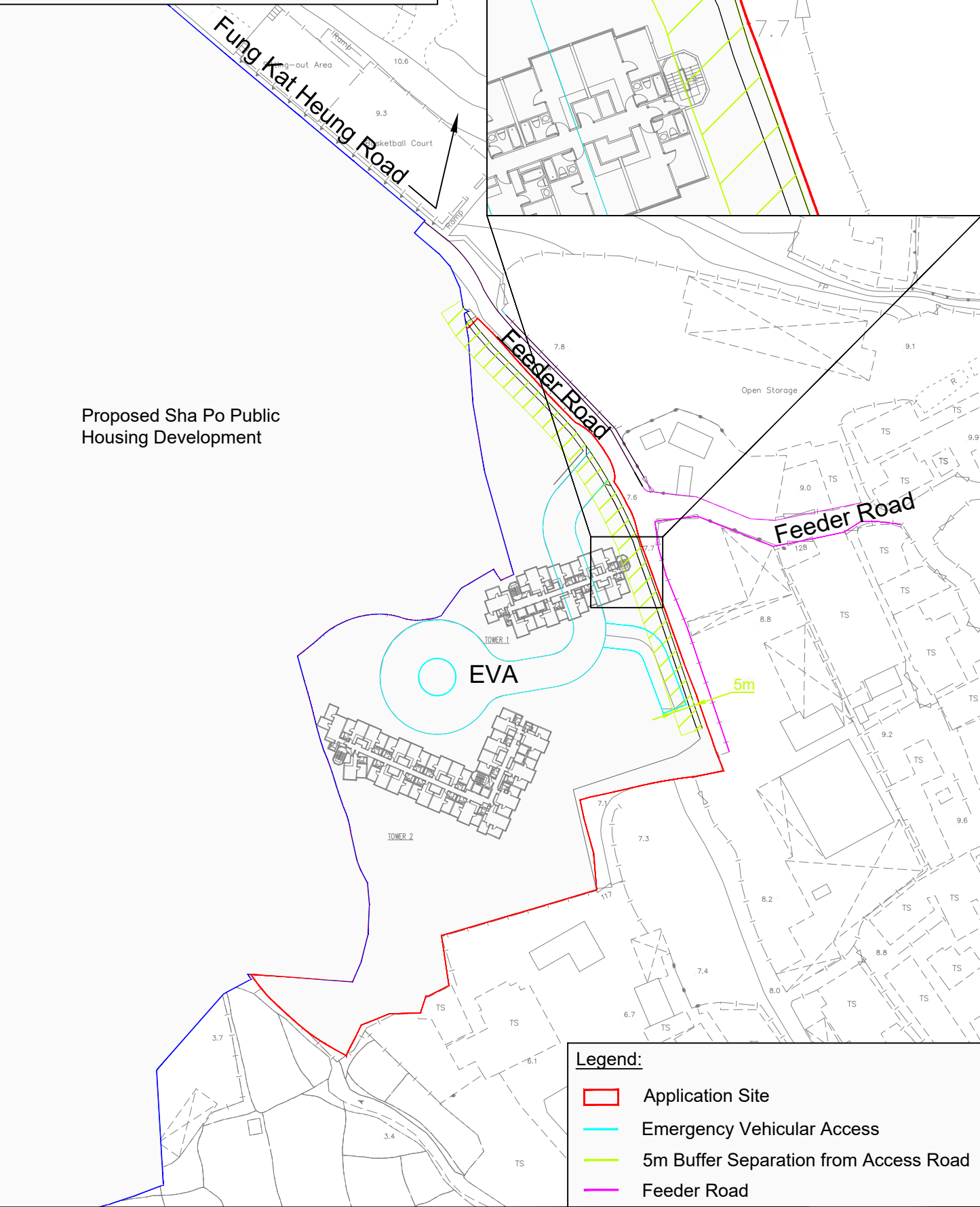


Figure: 2.1a

Title: HKPSG Vehicular Emission Buffer Distance for Nearby Road Network (Residential Tower)

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

RAMBOLL

Drawn by: BF

Checked by: CC

Rev.: 1.4

Date: Oct 2025

Remarks

No air sensitive uses, including openable windows, fresh air intake and recreational uses in open space shall be located within the buffer zone.

Proposed Sha Po Public Housing Development

Legend:

Application Site

At-Grade Fresh Air Intake Location for Eastern Clubhouse

Figure: 2.1b

Title: HKPSG Vehicular Emission Buffer Distance for Nearby Road Network (Basement Floor)

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

RAMBO

Drawn by: PL

Checked by: CC

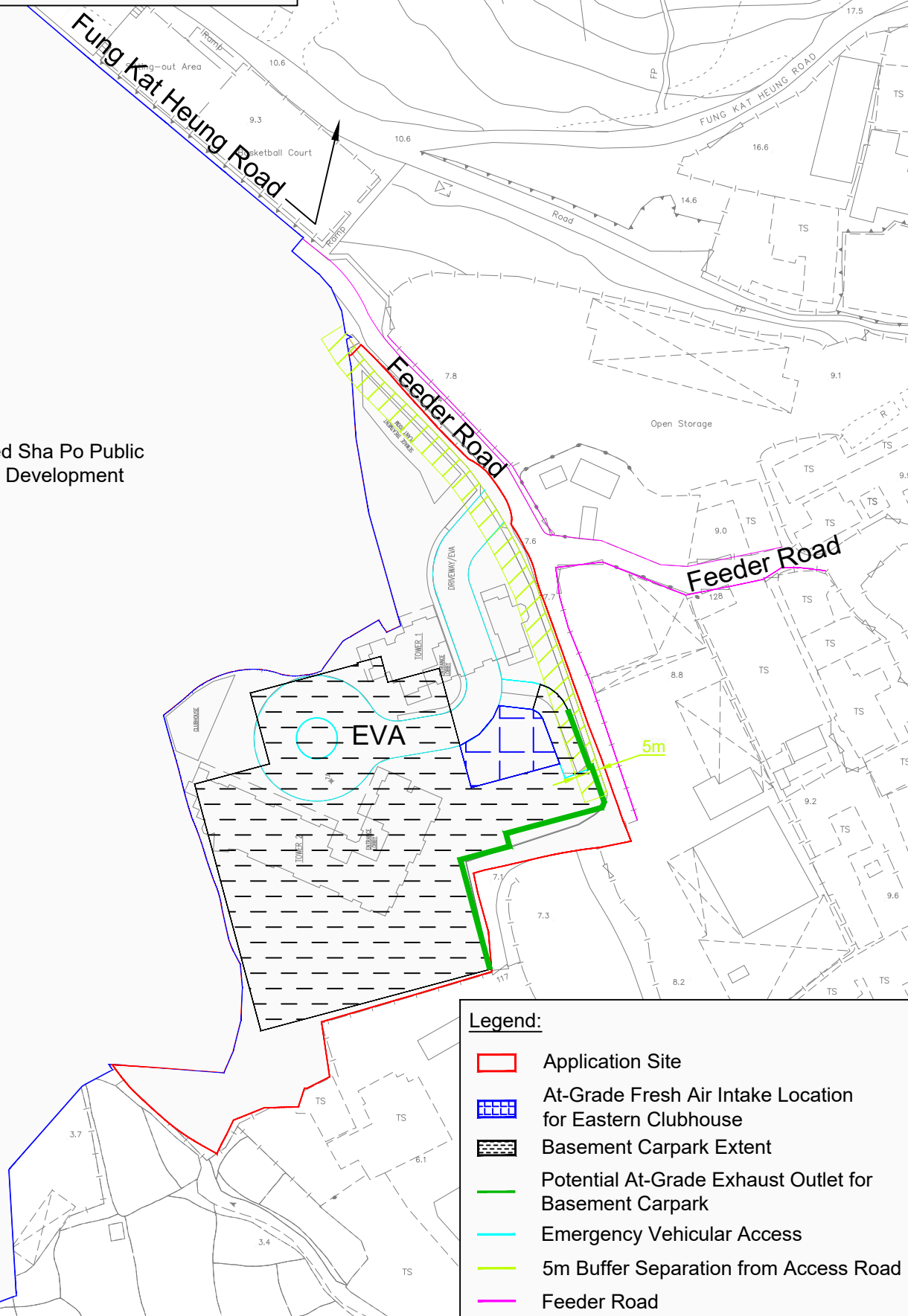
Rev.: 1.3

Date: Jun 2025

Remarks

No air sensitive uses, including openable windows, fresh air intake and recreational uses in open space shall be located within the buffer zone.

Proposed Sha Po Public Housing Development



Legend:

- Application Site
- At-Grade Fresh Air Intake Location for Eastern Clubhouse
- Basement Carpark Extent
- Potential At-Grade Exhaust Outlet for Basement Carpark
- Emergency Vehicular Access
- 5m Buffer Separation from Access Road
- Feeder Road

Figure: 2.1c

Title: HKPSG Vehicular Emission Buffer Distance for Nearby Road Network (Ground Floor)

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

RAMBOLL

Drawn by: PL

Checked by: CC

Rev.: 1.3

Date: Jun 2025

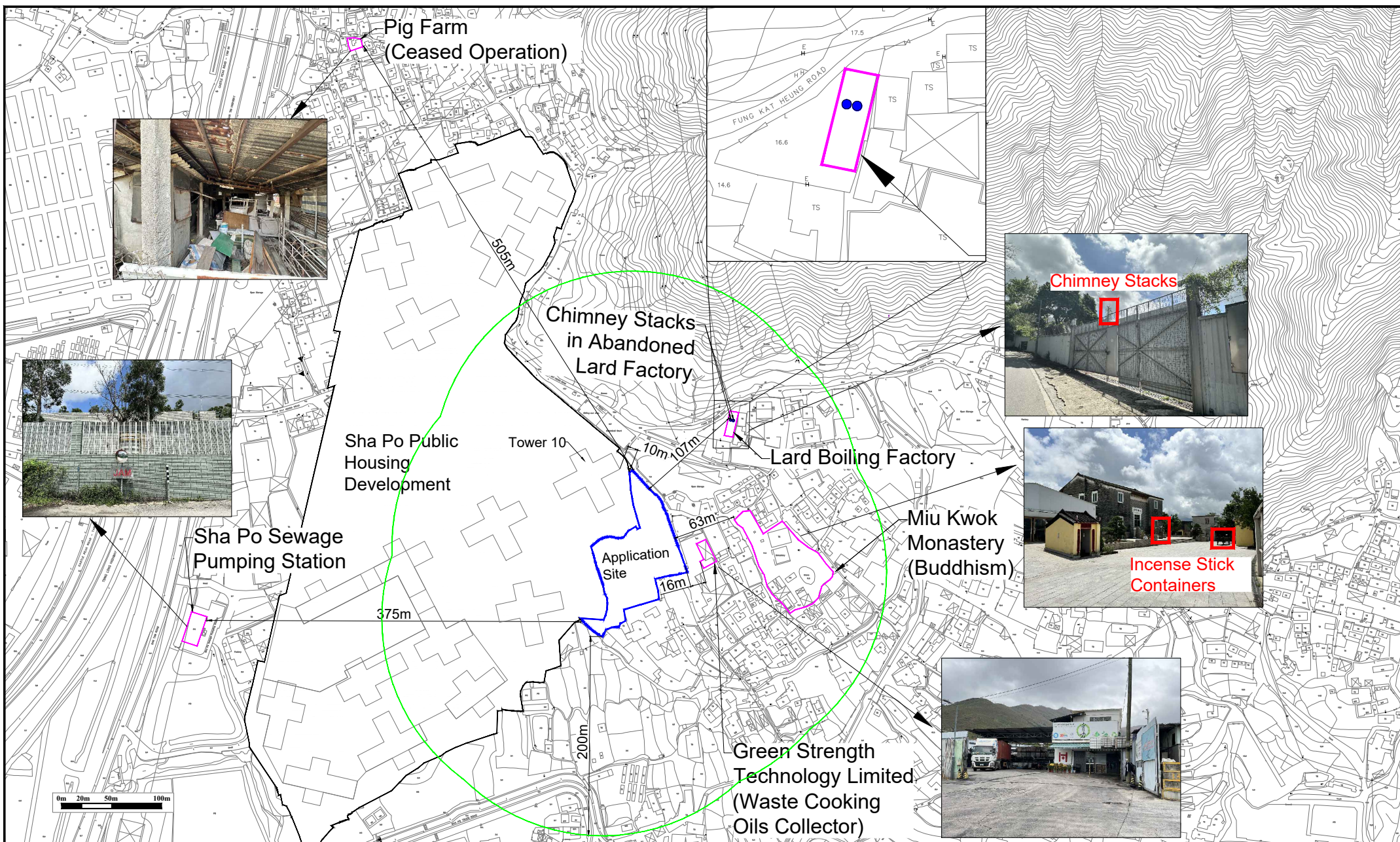


Figure: 2.2

Title: 200m Assessment Area and Abandoned Chimney Stack Location

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

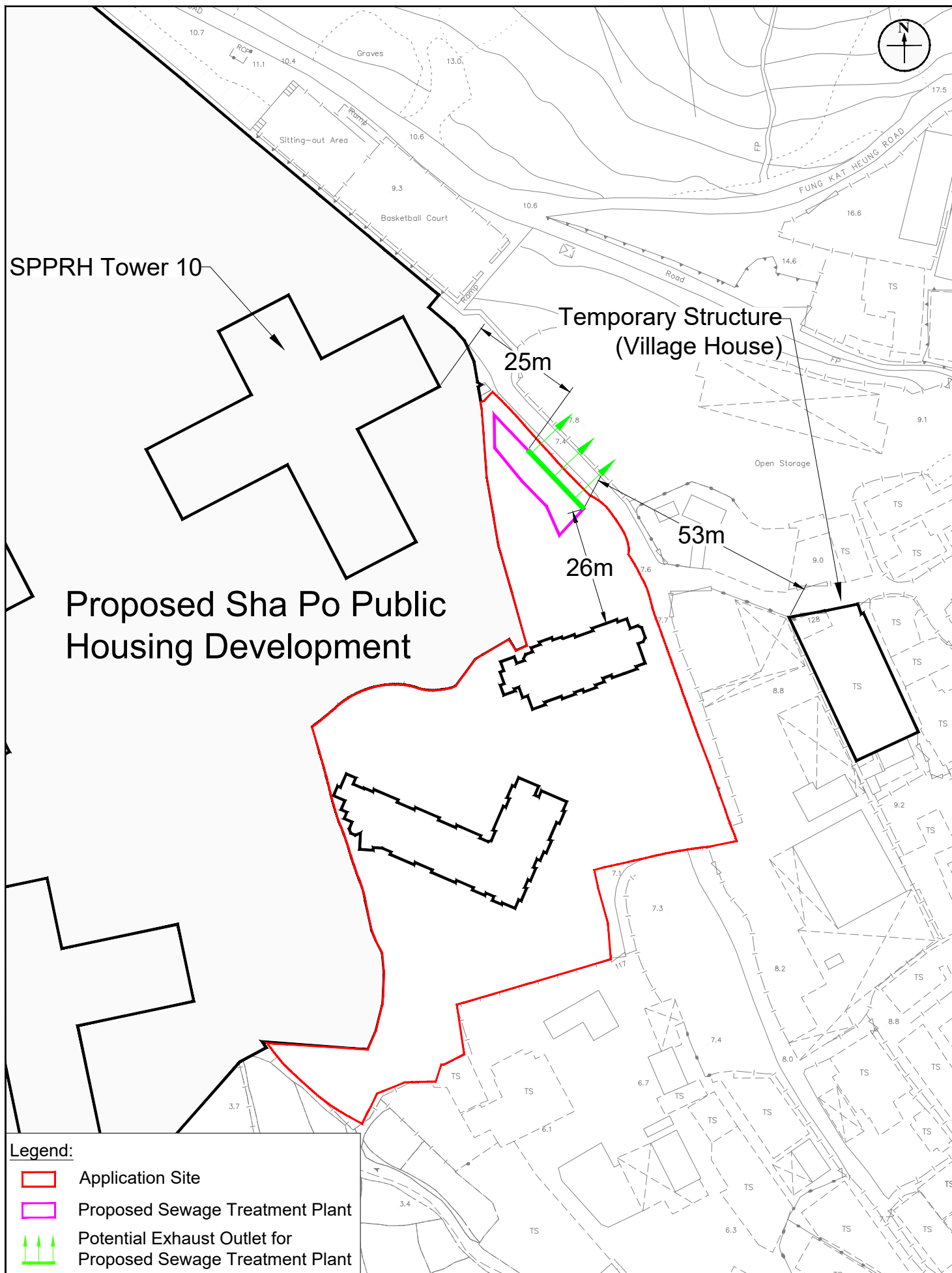
RAMBOLL

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Checked by: CC

Rev.: 1.4

Date: Oct 2025



RAMBOLL

Drawn by: AW

Checked by: CC

Rev.: 1.3

Date: Jun 2025

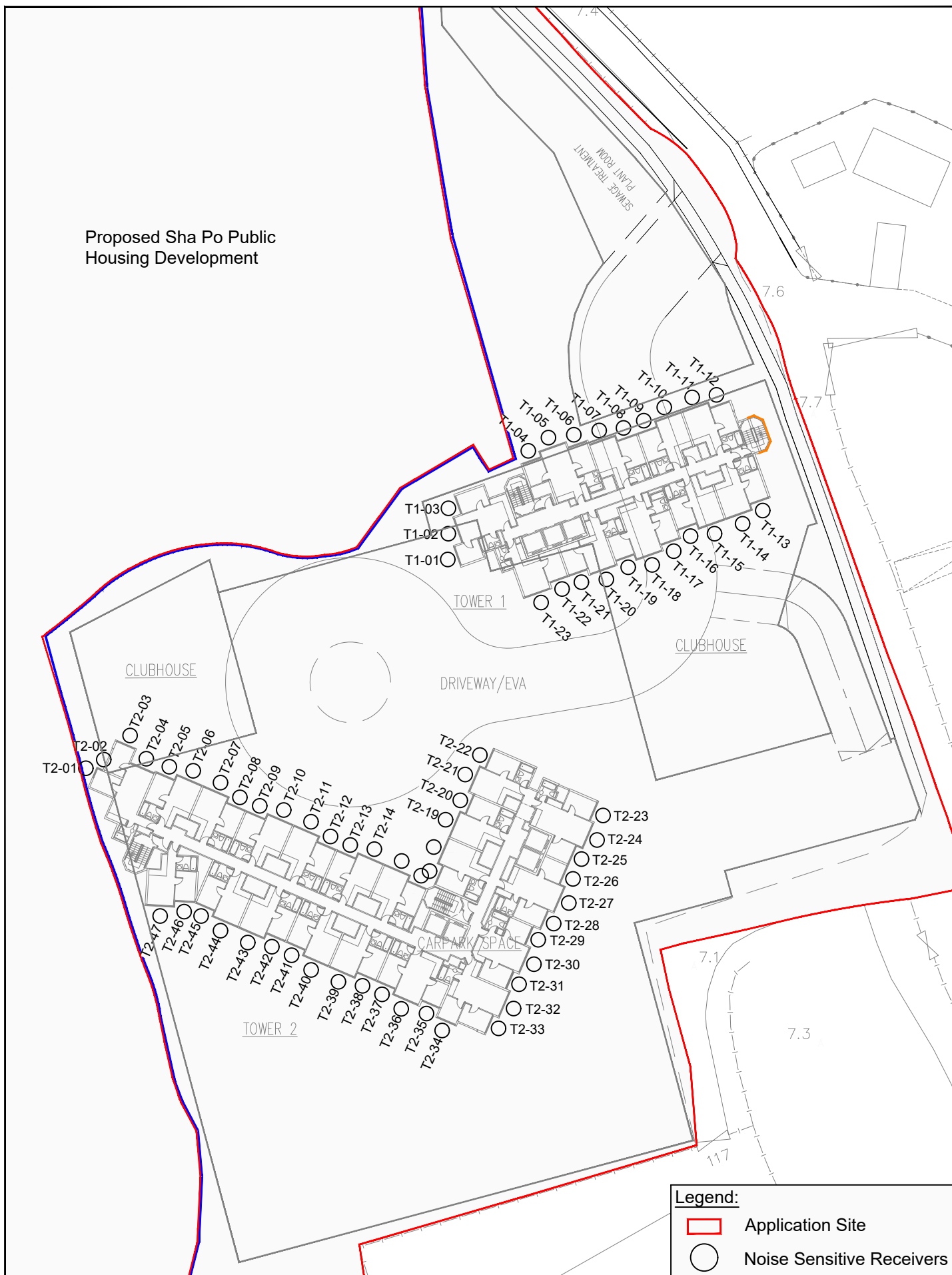


Figure: 3.1

Title: Locations of Selected Noise Sensitive Receivers for Road Traffic Noise Impact Assessment

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

RAMBOLL

Drawn by: PL

Checked by: CC

Rev.: 1.0

Date: Apr 2025

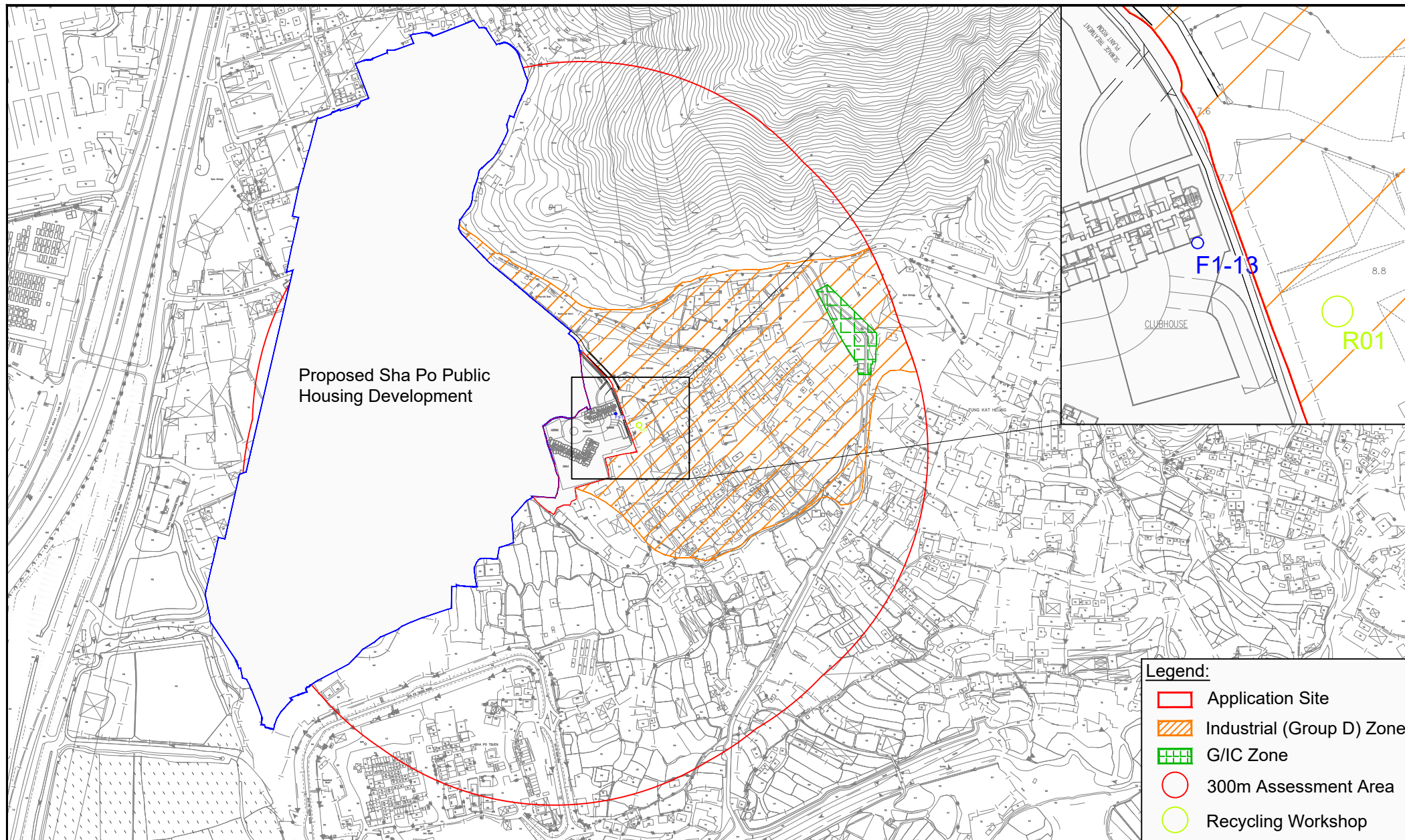


Figure: 4.1

Title: Location of Identified Fixed Noise Source and Representative Noise Sensitive Receiver for Fixed Noise Impact Assessment

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

RAMBOLL

Drawn by: PL

Checked by: CC

Rev.: 1.0

Date: Apr 2025

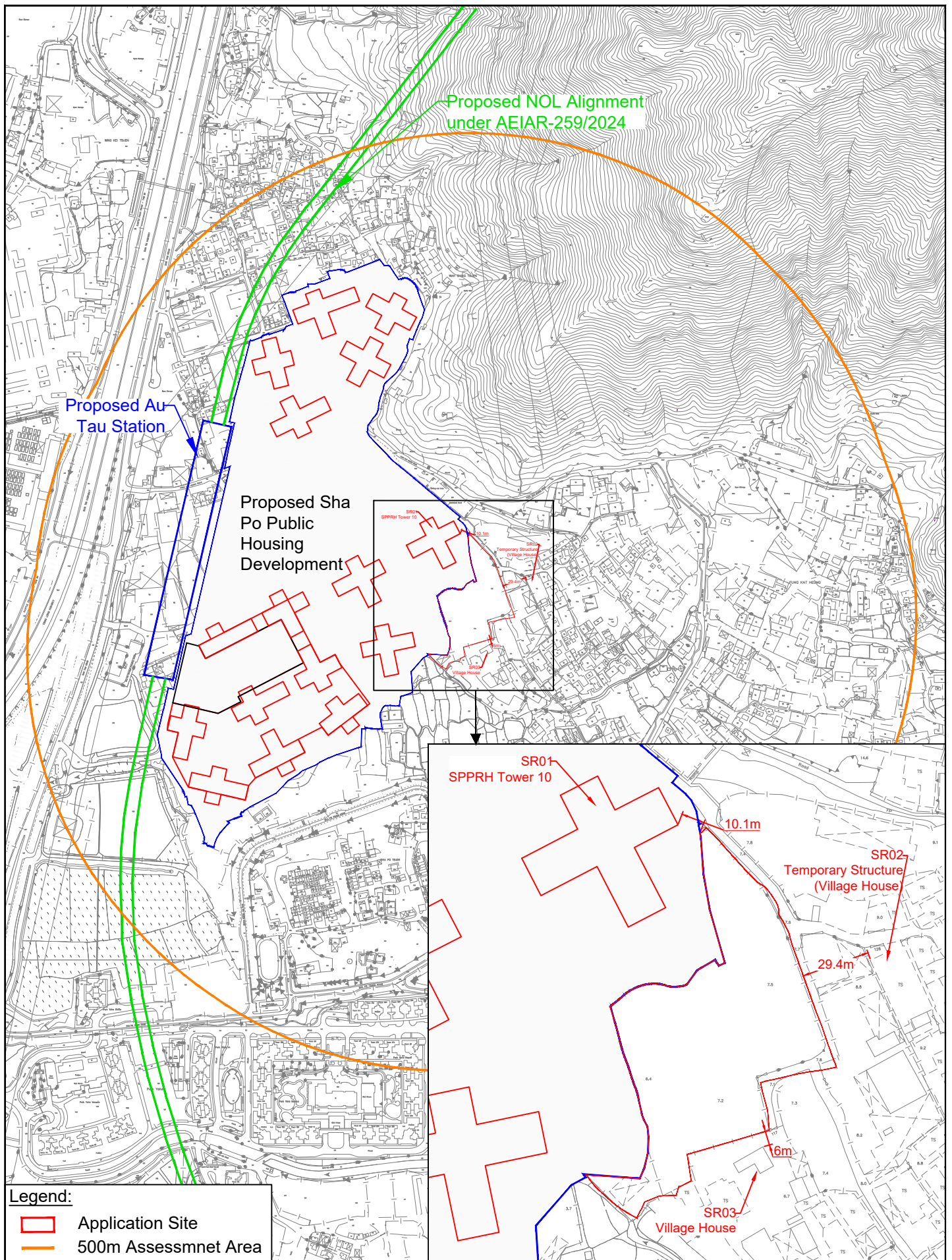


Figure: 5.1

Title: Location of Representative Air and Noise Sensitive Receivers for Construction Phase, and Concurrent Construction Works

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

RAMBOLL

Drawn by: PL

Checked by: CC

Rev.: 1.1

Date: Aug 2024

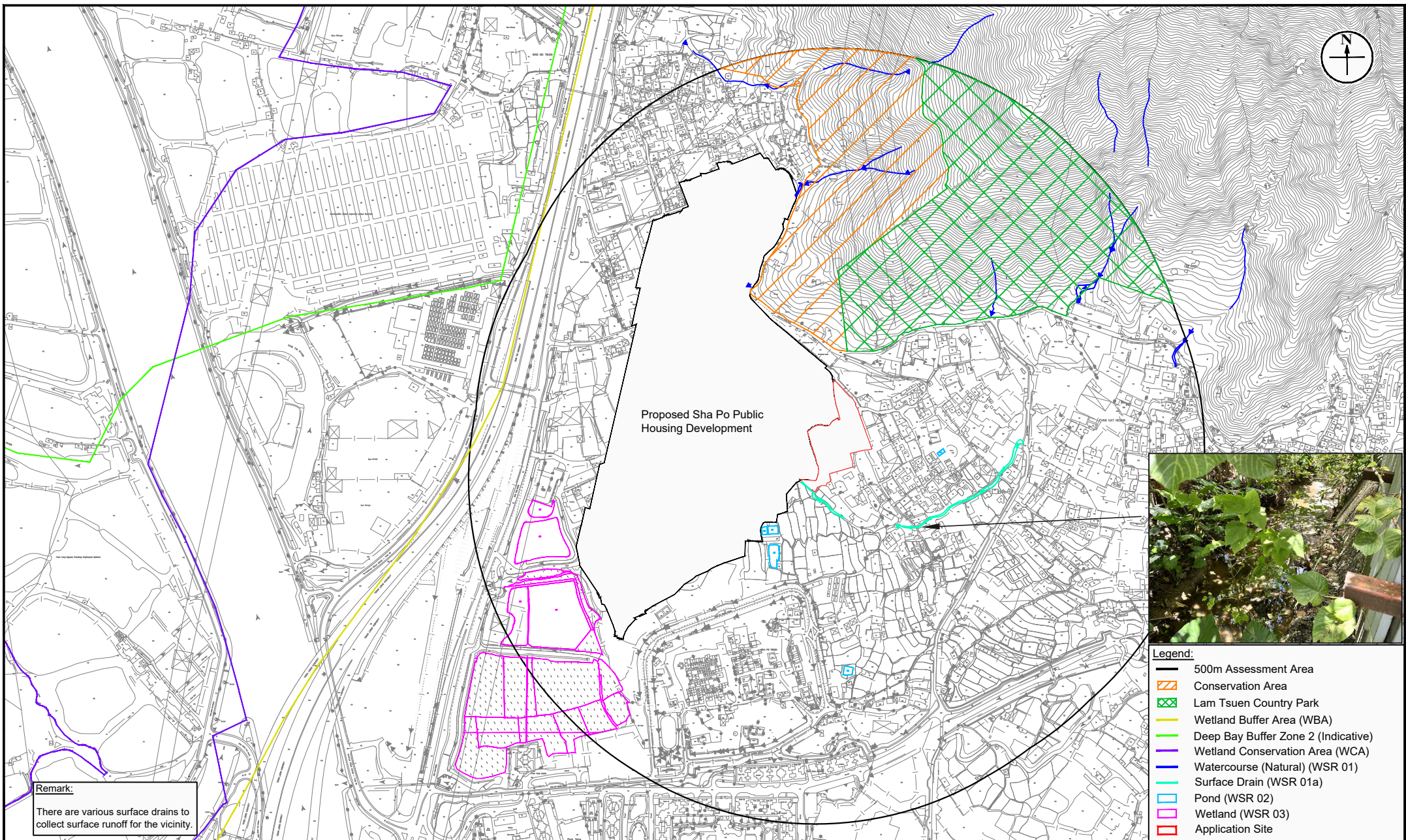


Figure: 5.2

Title: Location of Water Sensitive Receivers

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

RAMBOLL

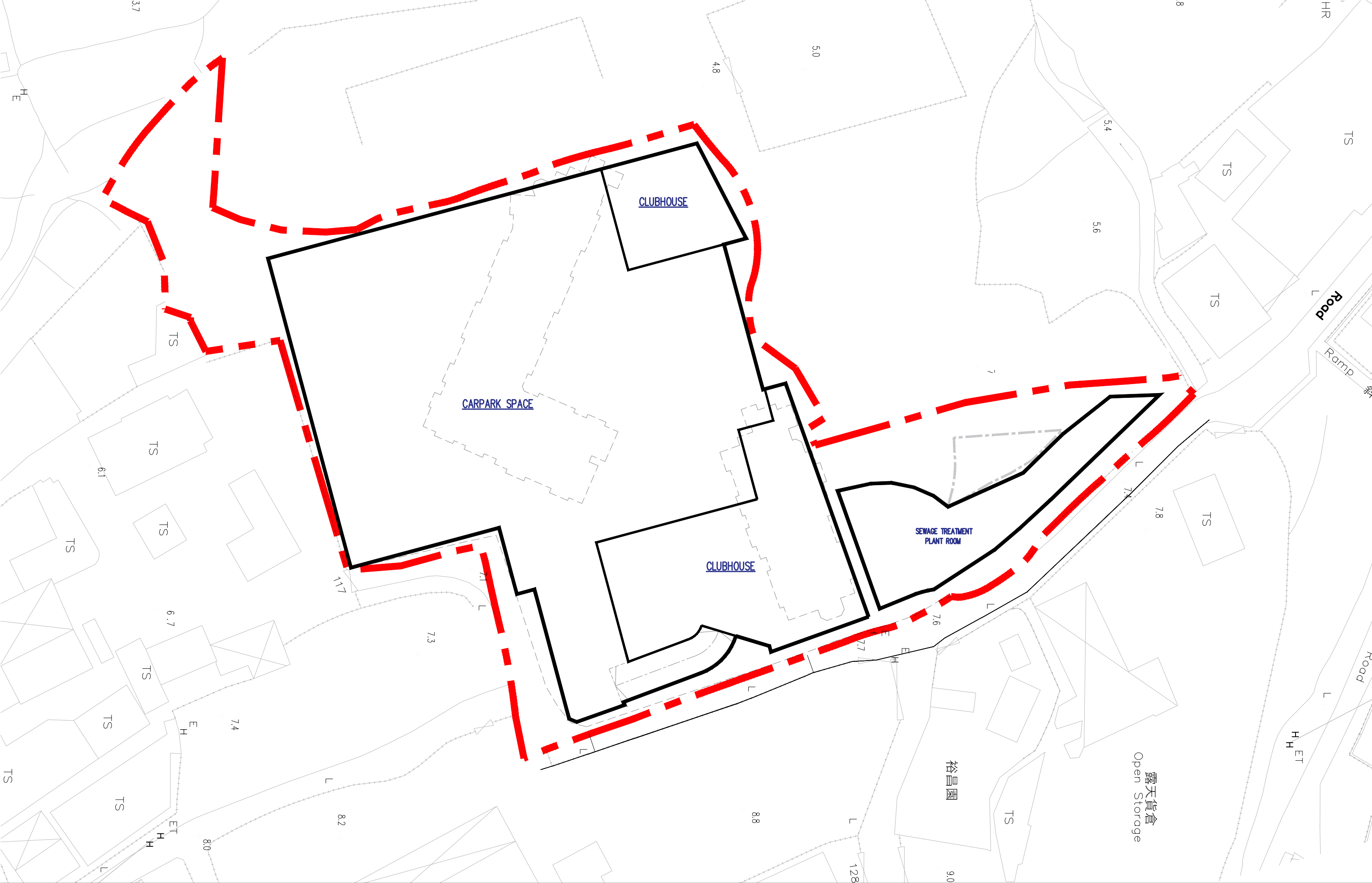
Drawn by: PL

Checked by: CC

Rev.: 1.1

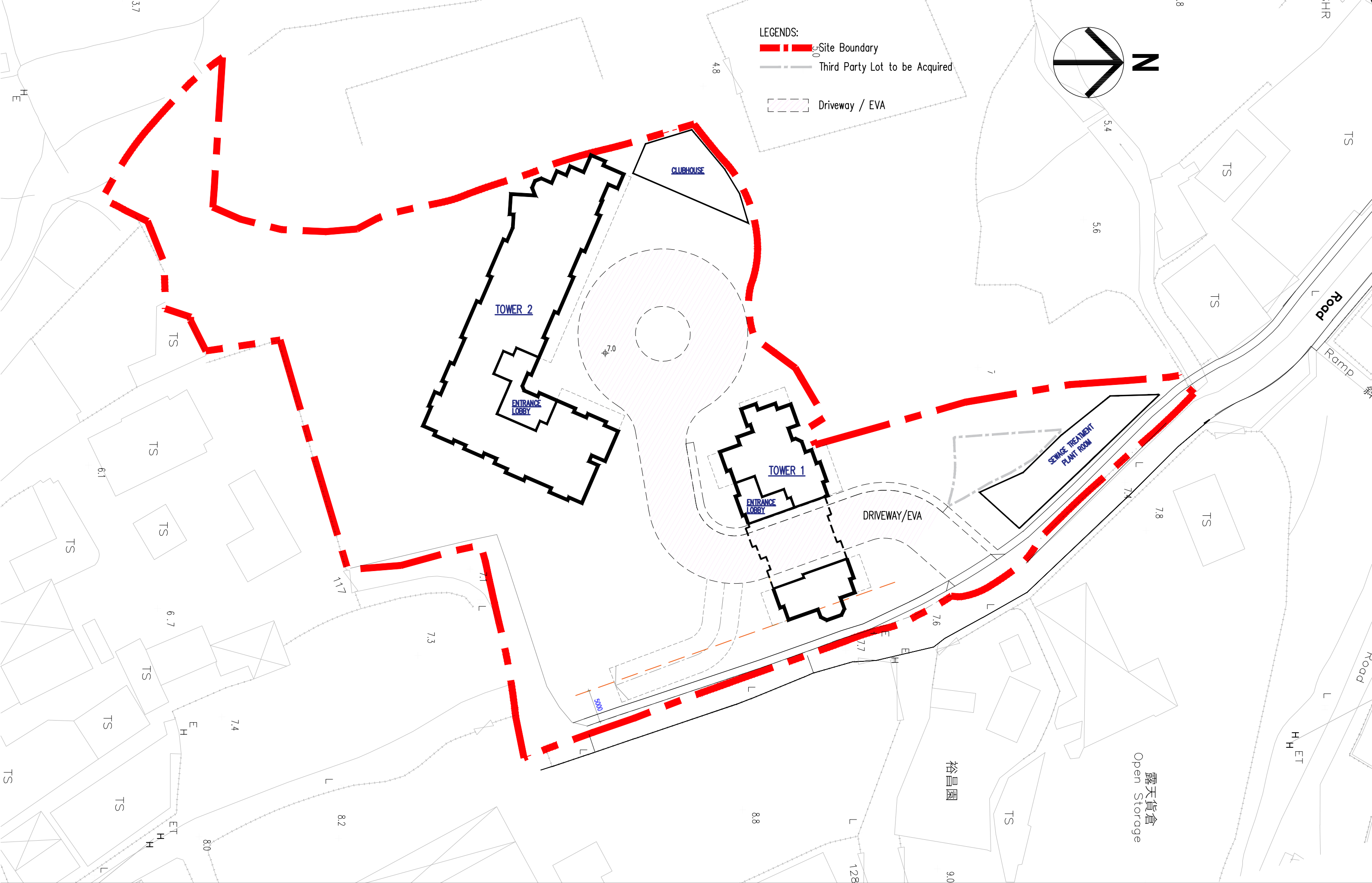
Date: Oct 2024

**Appendix 1.1 Master Layout Plan, Floor Plans and Sections of the Proposed
Development**



**Proposed Residential Development at Various Lots in D.D. 107
and Adjoining Government Land , Fung Kat Heung, Yuen Long.**

BASEMENT PLAN (1:500)

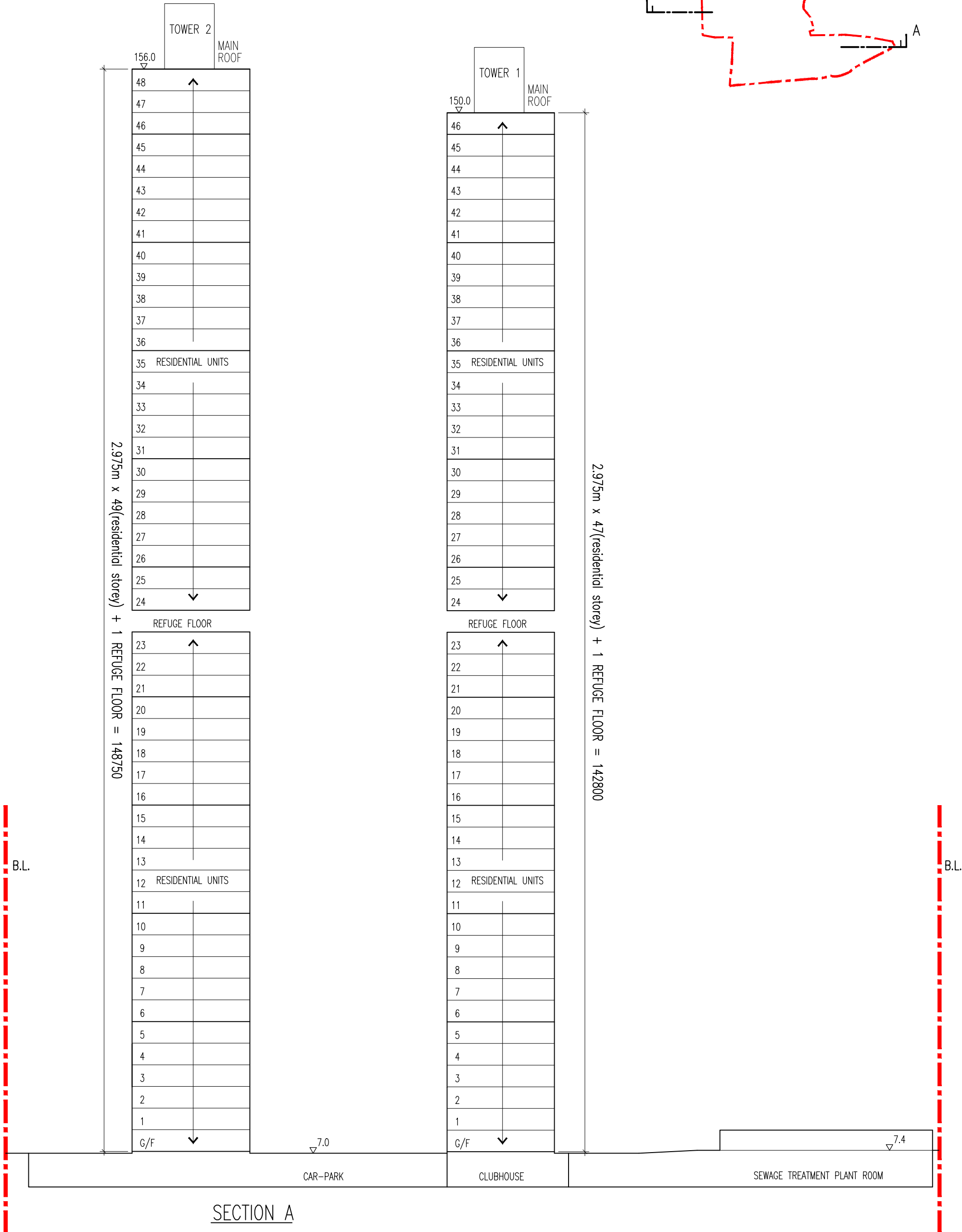


**Proposed Residential Development at Various Lots in D.D. 107
and Adjoining Government Land , Fung Kat Heung, Yuen Long.**

Proposed Residential Development at Various Lots in D.D. 107
and Adjoining Government Land , Fung Kat Heung, Yuen Long.

SCHEMATIC SECTION

(1:500)



Appendix 1.2 Extract of TM-DSS for Group C Inland Waters

Table 5 Standards for effluents discharged into Group C inland waters

(All units in mg/L unless otherwise stated; all figures are upper limits unless otherwise indicated)

Determinand	Flow rate (m ³ /day)	≤ 100	> 100 and ≤ 500	> 500 and ≤ 1000	> 1000 and ≤ 2000
pH (pH units)		6-9	6-9	6-9	6-9
Temperature (°C)		30	30	30	30
Colour (lovibond units) (25mm cell length)		1	1	1	1
Suspended solids		20	10	10	5
BOD		20	15	10	5
COD		80	60	40	20
Oil & Grease		1	1	1	1
Boron		10	5	4	2
Barium		1	1	1	0.5
Iron		0.5	0.4	0.3	0.2
Mercury		0.001	0.001	0.001	0.001
Cadmium		0.001	0.001	0.001	0.001
Silver		0.1	0.1	0.1	0.1
Copper		0.1	0.1	0.05	0.05
Selenium		0.1	0.1	0.05	0.05
Lead		0.2	0.2	0.2	0.1
Nickel		0.2	0.2	0.2	0.1
Other toxic metals individually		0.5	0.4	0.3	0.2
Total toxic metals		0.5	0.4	0.3	0.2
Cyanide		0.05	0.05	0.05	0.01
Phenols		0.1	0.1	0.1	0.1
Sulphide		0.2	0.2	0.2	0.1
Fluoride		10	7	5	4
Sulphate		800	600	400	200
Chloride		1000	1000	1000	1000
Total phosphorus		10	10	8	8
Ammonia nitrogen		2	2	2	1
Nitrate + nitrite nitrogen		30	30	20	20
Surfactants (total)		2	2	2	1
<u>E. coli</u> (count/100ml)		1000	1000	1000	1000

According to the separate SIA report for this planning application, the ADWF is ~1061m³/d. Therefore, this set of standard should be adopted for the onsite sewage treatment plant under the fallback option

Appendix 2.1 Correspondence with EPD regarding Valid SP Licence

Billy Fan

From: tszyanchau@epd.gov.hk
Sent: 18 December 2024 10:28
To: Anna Wu
Cc: Billy Fan; Susan Chan
Subject: Re: Request for Information for Specified Process (SP) License within 200m Assessment Area from Application Site
Attachments: 200m Location Plan.pdf

Dear Anna,

Section 12A Amendment of Plan Application for Proposed Rezoning from "Industrial (Group D)", "Residential (Group A)" and "Agriculture" to "Residential (Group A)1" zone for the Proposed Residential Development at Various Lots in DD107, Fung Kat Heung, Yuen Long, New Territories
Request for Information of Specified Process (SP) License within 200m Assessment Area from Application Site

We refer to your email dated 16 December 2024 requesting for information of SP license within the concerned area.

As at 18 December 2024, there is no valid SP License within the concerned area.

Should you have any queries, please contact the undersigned. Thanks.

Regards,
Kathy Chau
Environmental Protection Department
Tel:2158 5851

From: Anna Wu <AYMWU@ramboll.com>
To: "tszyanchau@epd.gov.hk" <tszyanchau@epd.gov.hk>
Cc: Billy Fan <bfan@ramboll.com>, Susan Chan <SUSANCHAN@ramboll.com>
Date: 16/12/2024 17:28
Subject: Request for Information for Specified Process (SP) License within 200m Assessment Area from Application Site

Dear Ms Chau,

Section 12A Amendment of Plan Application for Proposed Rezoning from "Industrial (Group D)", "Residential (Group A)" and "Agriculture" to "Residential (Group A)1" zone for the Proposed Residential Development at Various Lots in DD107, Fung Kat Heung, Yuen Long, New Territories
Request for Information of Specified Process (SP) License within 200m Assessment Area from Application Site

We are the environmental consultant employed by the project proponent for conducting an Environmental Assessment for the captioned Section 12A Planning Application at Various Lots in D.D. 107, Fung Kat Heung, Yuen Long.

Of particular interests is whether there are any valid SP Licenses issued under the APCO for facilities or operations located within 200m Assessment Area from the Application Site. If there are any valid SP Licenses granted within the Assessment Area, we would be much appreciated if you would provide us the license number of these Specified Processes.

Due to the urgency of the project, we would be much appreciated if you could provide the requested information by **31 December 2024**.

Should you have any queries, please do not hesitate to contact the undersigned. We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Kind regards

Anna Wu

Assistant Environmental Consultant

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aymwu@ramboll.com

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Appendix 2.2 Photo Records – Abandoned Lard Boiling Factory

Photo Records – Abandoned Lard Boiling Factory

Site Survey on 9 February 2024

	
Site Observation: - The main gate was closed and locked; - No operation and noise from inside was observed; - No person was attended to this factory; - No noticeable emission from chimneys was observed.	Site Observation: - No noticeable emission from chimneys was observed.

Site Survey on 28 February 2024

	
Site Observation: - The main gate was closed and locked; - No operation and noise from inside was observed; - No person was attended to this factory; - No noticeable emission from chimneys was observed.	

Site Survey on 1 August 2024



Site Observation:

- The main gate was closed and locked;
- No operation and noise from inside was observed;
- No person was attended to this factory;
- No noticeable emission from chimneys was observed.



Site Observation:

- No operating activities was observed;
- Rolling gates of the building were closed (i.e. no sign of operation was observed).

Site Survey on 24 June 2025



Site Observation:

- The factory is used for storage of construction material and vehicle parking;
- No operation and noise from inside was observed;
- No noticeable emission from chimneys was observed.



Site Observation:

- Storage of construction material such as metal bars and beams was observed.

Appendix 2.3 Photo Records – Miu Kwok Monastery

Photo Records – Miu Kwok Monastery

Site Survey on 9 February 2024

	
Site Observation: - No joss paper burning activity was observed; - A incense stick container (no incense stick was being burnt) was observed.	Site Observation: - A incense stick container (with few incense sticks were being burnt) was observed.
	
Site Observation: - No joss paper burning activity was observed; - No incense stick container was observed.	

Site Survey on 1 August 2024



Site Observation:

- No joss paper burning activity was observed;
- A incense stick container (no incense stick was being burnt) was observed.



Site Observation:

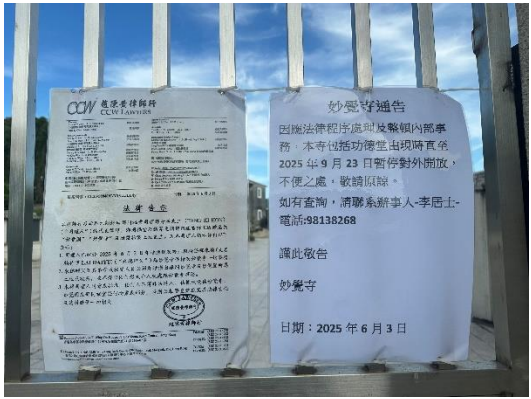
- A incense stick container (no incense stick was being burnt) was observed.



Site Observation:

- No joss paper burning activity was observed;
- No incense stick container was observed.

Site Survey on 24 June 2025

	
Site Observation: - Miu Kwok Monastery is closed due to legal issue. The monastery is currently not accessible by public.	Site Observation: - No person was attended to the monastery; - No joss paper burning activity was observed.
	
Site Observation: - No incense stick container was observed.	

Appendix 2.4 Photo Records – Recycling Workshop

Photo Records – Recycling Workshop

Site Survey on 9 February 2024



Site Observation:

- The workshop was tidy and clean;
- No odour from the workshop was observed.



Site Observation:

- The containers identified within the workshop were well-maintained.



Site Observation:

- The containers identified within the workshop were well-maintained.

Site Survey on 28 February 2024



Site Observation:

- The workshop was tidy and clean;
- No odour from the workshop was observed.



Site Observation:

- The workshop was tidy and clean;
- No odour from the workshop was observed.



Site Observation:

- The workshop was tidy and clean;
- No odour from the workshop was observed.

Site Survey on 24 June 2025



Site Observation:

- The workshop was tidy and clean;
- No odour from the workshop was observed.

Appendix 2.5 Correspondence with EPD regarding Odour Complaint

本署檔案
OUR REF: () EP910/E6/1
來函檔案
YOUR REF: CKHYLFKHEI00_0_0012L.24
電話
TEL NO: 2158 5851
圖文傳真
FAX NO: 2650 6033
網址
HOMEPAGE: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (North)
10/F., Shatin Government Offices,
1 Sheung Wo Che Road,
Shatin, N.T.



環境保護署
環保法規管理科
區域辦事處(北)
新界沙田上禾輦路1號
沙田政府合署10樓

By Post and Fax (3465 2899)

27 August 2024

Ramboll Hong Kong Limited
21/F, BEA Harbour View Centre, 56 Gloucester Road
Wan Chai, Hong Kong
(Attn.: Bily FAN)

Dear Sir/Madam,

Section 12 A Amendment of Pan Application for Proposed Rezoning from "Industrial (Group D)", "Residential (Group A)" and "Agriculture" to "Residential (Group A)1" zone for the Proposed Residential Development at Variou Lots in DD107, Fung Kat Heung, Yuen Long, New Territories
Request for Information for Ordour Complaints within 200m Assessment Area from Application Site

We refer to your above letter under reference requesting for complaints record received in the past five years (2019-2024) on the odour issue within 200m Assessment Aera from the Application Site.

This Regional Office has no record of complaints regarding odour issue at the captioned locations in the past five years. Nonetheless, you may also need to check with other relevant parties / departments for such information as appropriate.

Yours faithfully,

A handwritten signature in black ink, appearing to be 'CHAU Tsz-yan'.

(CHAU Tsz-yan)
for Director of Environmental Protection

Anna Wu

From: tszyanchau@epd.gov.hk
Sent: Thursday, December 19, 2024 3:52 PM
To: Anna Wu
Cc: Billy Fan; Susan Chan
Subject: Re: Request for Information of Air/Odour Complaints of Lard Boiling Factory and Miu Kwok Monastery
Attachments: Application Site with Lard Boiling Factory and Miu Kwok Monastery.pdf; CKHYLFKHEI00_0_0013F.24.tif

Dear Anna,

Request for Information of Air/Odour Complaints of Lard Boiling Factory and Miu Kwok Monastery

We refer to your email dated 18 December 2024 requesting for the information of air / odour complaints of Lard Boiling Factory and Miu Kwok Monastery.

This Regional Office has no record of air / odour complaints for the captioned locations in the past 5 years. Nonetheless, you may also need to check with other relevant parties / department for such information as appropriate.

Should you have any queries, please contact the undersigned. Thanks.

Regards,
Kathy Chau
Environmental Protection Department
Tel:2158 5851

From: Anna Wu <AYMWU@ramboll.com>
To: "tszyanchau@epd.gov.hk" <tszyanchau@epd.gov.hk>
Cc: Billy Fan <bfan@ramboll.com>, Susan Chan <SUSANCHAN@ramboll.com>
Date: 18/12/2024 10:14
Subject: Request for Information of Air/Odour Complaints of Lard Boiling Factory and Miu Kwok Monastery

Dear Ms Chau,

We are the environmental consultant employed by the project proponent for conducting an Environmental Assessment for the captioned Section 12A Planning Application at Various Lots in D.D. 107, Fung Kat Heung, Yuen Long. Reference is made to the reply dated 27 August 2024 (Ref: () EP910/E6/1), which stated that there are no records of complaints regarding odour issues within the 200m assessment area from the Application Site. We are writing to seek clarification regarding the air/odour complaints of lard boiling factory and Miu Kwok Monastery, in order to address EPD's comments. Of particular interests is whether there is any information regarding historical complaint(s) received in the past five years (2019-2024) on the air/odour issue (if any) of Lard Boiling Factory and Miu Kwok Monastery (figure as attached).

If there are air/odour complaints related to these facilities, we would be much appreciated if you would provide us the number of complaints received in each year between 2019 to 2024. We would be grateful if there is any additional information including the date of complaint, affected area, as well as any identification of the odour source(s) and any mitigation measures / improvements of the odour source(s), if necessary, have been implemented after receiving the complaints(s).

Due to the urgency of the project, we would be much appreciated if you could provide the requested information by **31 December 2024**.

Should you have any queries, please do not hesitate to contact the undersigned. We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Kind regards
Anna Wu

Assistant Environmental Consultant

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aymwu@ramboll.com

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Classification: Confidential

Anna Wu

From: tszyanchau@epd.gov.hk
Sent: Thursday, December 19, 2024 3:55 PM
To: Anna Wu
Cc: Billy Fan; Susan Chan
Subject: Re: Request for Information of Odour Complaints of Green Strength Technology Limited
Attachments: Location of waste oil collector and Application Site-Location Plan.pdf

Dear Anna,

Request for Information of Air/Odour Complaints of Green Strength Technology Limited

We refer to your email dated 19 December 2024 requesting for the information of air / odour complaints of Green Strength Technology Limited.

This Regional Office has no record of air / odour complaints for the captioned locations in the past 5 years. Nonetheless, you may also need to check with other relevant parties / department for such information as appropriate.

Should you have any queries, please contact the undersigned. Thanks.

Regards,
Kathy Chau
Environmental Protection Department
Tel:2158 5851

From: Anna Wu <AYMWU@ramboll.com>
To: "tszyanchau@epd.gov.hk" <tszyanchau@epd.gov.hk>
Cc: Billy Fan <bfan@ramboll.com>, Susan Chan <SUSANCHAN@ramboll.com>
Date: 19/12/2024 14:10
Subject: Request for Information of Odour Complaints of Green Strength Technology Limited

Dear Ms Chau,

We are the environmental consultant employed by the project proponent for conducting an Environmental Assessment for the captioned Section 12A Planning Application at Various Lots in D.D. 107, Fung Kat Heung, Yuen Long.
Of particular interests is whether there is any information regarding historical complaint(s) received in the past five years (2019-2024) on the odour issue (if any) of Green Strength Technology Limited which is the collector for waste cooking oils in close proximity to the Site (figure as attached).

If there are odour complaints related to these facilities, we would be much appreciated if you would provide us the number of complaints received in each year between 2019 to 2024. We would be grateful if there is any additional information including the date of complaint, affected area, as well as any identification of the odour source(s) and any mitigation measures / improvements of the odour source(s), if necessary, have been implemented after receiving the complaints(s).

Due to the urgency of the project, we would be much appreciated if you could provide the requested information by **3 January 2025**.

Should you have any queries, please do not hesitate to contact the undersigned. We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Kind regards
Anna Wu

Assistant Environmental Consultant

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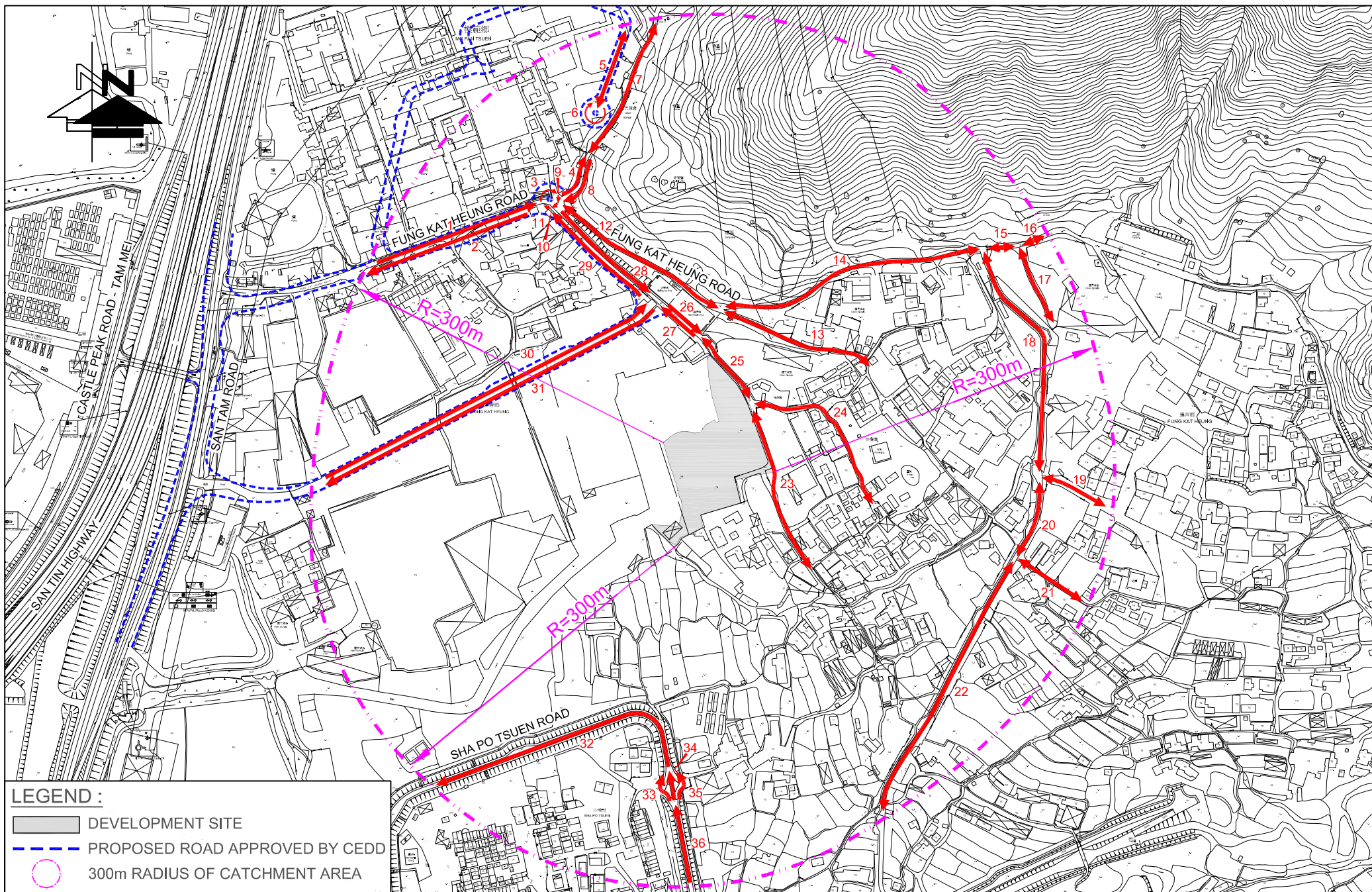
aymwu@ramboll.com

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Appendix 3.1 Traffic Forecast for Year 2050



LEGEND :

- DEVELOPMENT SITE
- PROPOSED ROAD APPROVED BY CEDD
- 300m RADIUS OF CATCHMENT AREA

FIGURE NO.: 1		PROJECT TITLE: Proposed Road Widening of a Section of Local Access Road at Fung Kat Heung	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 23004HK		DRAWING TITLE: INDEX PLAN FOR TNIA	
SCALE: 1 : 4400 @A4	DATE: 11 JUN 2024		

23004HK**Residential Development at Fung Kat Heung, Yuen Long****TRAFFIC FORECAST FOR TRAFFIC NOISE IMPACT ASSESSMENT**

Link No.	Road Name	Speed	Direction	Year 2050			
				AM Peak		PM Peak	
				Traffic Flow (veh/hr)	HV%	Traffic Flow (veh/hr)	HV%
1	Fung Kat Heung Road	50	EB	370	25%	350	20%
2	Fung Kat Heung Road	50	WB	320	24%	300	18%
3	Fung Kat Heung Road/ Local Road	50	Roundabout	370	25%	350	22%
4	Local Road	50	NB	10	71%	10	29%
5	Proposed Road	50	2-way	50	15%	50	15%
6	Proposed Road	50	Roundabout	50	15%	50	15%
7	Local Road	50	2-way	20	62%	10	35%
8	Local Road	50	WB	10	50%	10	40%
9	Fung Kat Heung Road/ Local Road	50	Roundabout	360	25%	340	17%
10	Fung Kat Heung Road/ Local Road	50	Roundabout	110	20%	30	16%
11	Fung Kat Heung Road/ Local Road	50	Roundabout	320	23%	300	18%
12	Fung Kat Heung Road	50	2-way	160	57%	110	34%
13	Local Road	50	2-way	20	20%	30	18%
14	Fung Kat Heung Road	50	2-way	150	57%	80	34%
15	Fung Kat Heung Road	50	2-way	160	63%	40	36%
16	Fung Kat Heung Road	50	2-way	30	60%	30	32%
17	Local Road	50	2-way	30	60%	30	31%
18	Mei Fung Road	50	2-way	60	55%	40	30%
19	Local Road	50	2-way	60	59%	40	36%
20	Mei Fung Road	50	2-way	50	56%	40	33%
21	Local Road	50	2-way	30	36%	30	34%
22	Mei Fung Road	50	2-way	30	46%	30	34%
23	Local Road	50	2-way	20	50%	20	15%
24	Local Road	50	2-way	10	50%	10	14%
25	Local Road	50	2-way	200	15%	130	12%
26	Local Road	50	SB	70	13%	60	14%
27	Local Road	50	NB	120	12%	50	10%
28	Local Road	50	SB	310	25%	260	22%
29	Local Road	50	NB	210	27%	260	23%
30	Proposed Road	50	EB	670	18%	610	16%
31	Proposed Road	50	WB	890	15%	550	14%
32	Sha Po Tsuen Road	50	WB	90	10%	90	10%
33	Sha Po Tsuen Road	50	NB	10	10%	10	10%
34	Sha Po Tsuen Road	50	NB	70	10%	70	10%
35	Sha Po Tsuen Road	50	NB	10	10%	10	10%
36	Sha Po Tsuen Road	50	NB	90	10%	90	10%

Appendix 3.2 Result of Road Traffic Noise Impact Assessment

[illegible]

Notes:	
71	Noise level exceed standard of 70 dB(A)
-	Not available

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers for PM Peak Flow
Base Case

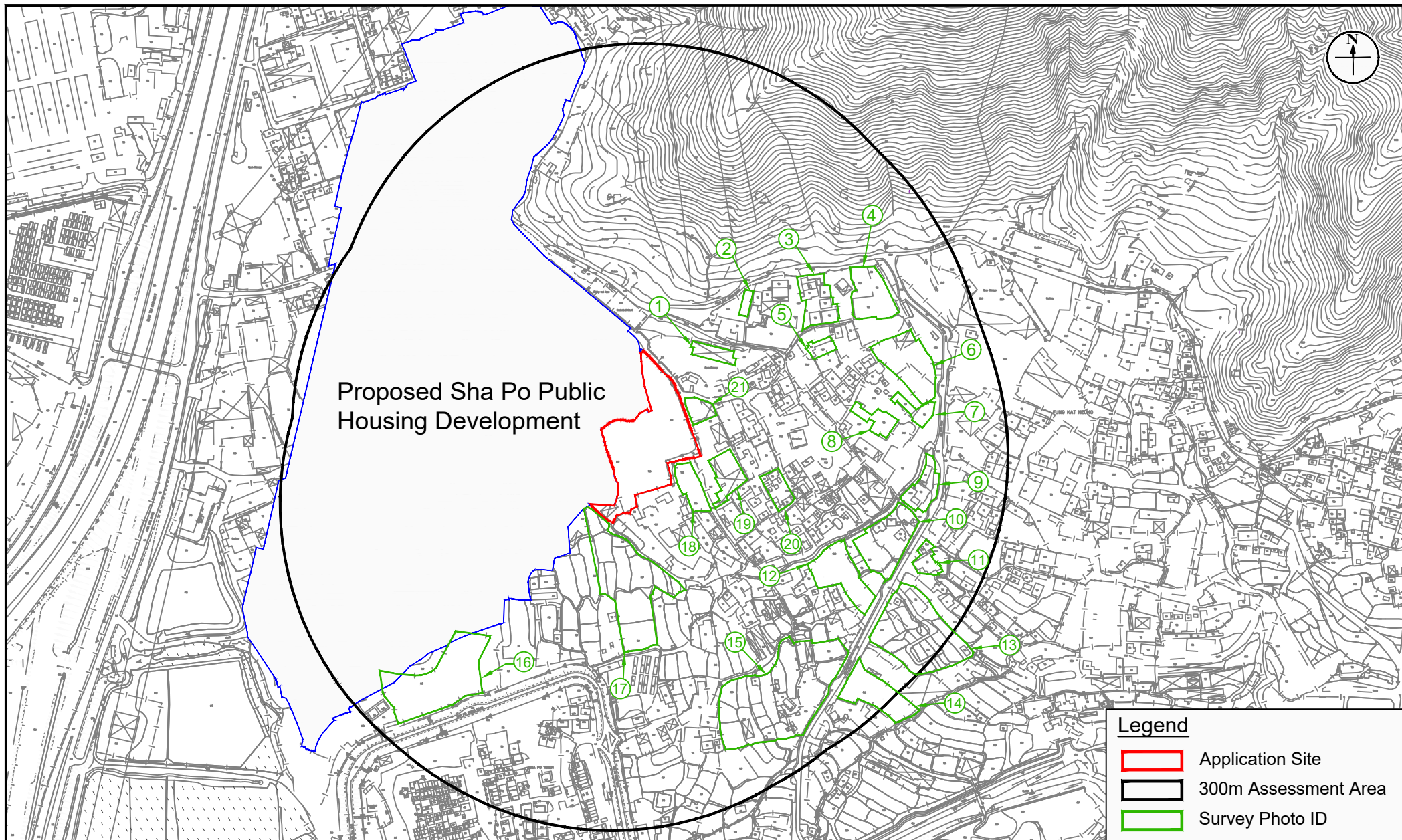
Tower 1																									
Floor	mPD	T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07	T1-08	T1-09	T1-10	T1-11	T1-12	T1-13	T1-14	T1-15	T1-16	T1-17	T1-18	T1-19	T1-20	T1-21	T1-22	T1-23	
G/F	7.2	64	64	65	66	66	66	-	-	-	-	66	66	56	55	-	-	-	-	-	-	-	51	57	
1/F	10.2	64	64	65	66	66	66	-	-	-	-	66	66	56	55	-	-	-	-	-	-	-	52	52	51
2/F	13.2	64	64	65	66	66	66	66	66	66	66	66	66	56	55	54	53	53	53	52	52	52	52	51	57
3/F	16.1	64	64	65	66	66	66	66	66	66	66	66	66	56	55	54	53	53	53	52	52	52	52	51	57
4/F	19.1	64	64	65	66	66	66	66	66	66	66	66	66	56	55	54	53	53	53	52	52	52	52	51	57
5/F	22.1	64	64	65	66	66	66	66	66	66	66	66	66	56	55	54	53	53	53	52	52	52	52	51	57
6/F	25.1	64	64	65	65	65	65	65	65	65	65	65	65	56	55	54	53	53	53	52	52	52	52	51	57
7/F	28.0	64	64	64	65	65	65	65	65	65	65	65	65	56	55	54	53	53	53	52	52	52	52	51	57
8/F	31.0	64	64	64	65	65	65	65	65	65	65	65	65	56	55	54	53	53	53	52	52	52	52	51	57
9/F	34.0	64	64	64	65	65	65	65	65	65	65	65	65	56	55	54	53	53	53	52	52	52	52	51	57
10/F	37.0	64	64	64	65	65	65	65	65	65	65	65	65	56	55	54	53	53	53	52	52	52	52	51	57
11/F	39.9	64	64	64	65	65	65	65	65	65	65	65	65	56	55	54	53	53	53	52	52	52	51	51	57
12/F	42.9	64	64	64	65	65	65	65	65	65	65	65	65	56	55	53	52	53	52	52	52	52	51	51	57
13/F	45.9	64	64	64	65	65	65	65	65	65	65	65	65	56	54	53	52	52	52	52	52	52	51	51	57
14/F	48.9	64	64	64	65	65	65	65	65	65	65	65	65	56	54	53	52	52	52	52	52	52	51	51	57
15/F	51.8	64	64	64	65	65	65	65	65	65	65	65	65	56	54	53	52	52	52	52	52	52	51	51	57
16/F	54.8	64	64	64	65	65	65	65	65	65	65	65	65	56	54	53	52	52	52	52	52	52	51	51	57
17/F	57.8	64	64	64	65	65	65	65	65	65	65	65	65	56	54	53	52	52	52	52	52	52	51	51	57
18/F	60.8	64	64	64	65	65	65	65	64	64	64	64	64	55	54	53	52	52	52	52	51	52	51	51	57
19/F	63.7	64	64	64	65	65	65	64	64	64	64	64	64	55	54	53	52	52	52	52	51	51	51	51	57
20/F	66.7	64	64	64	65	65	65	64	64	64	64	64	64	55	54	53	52	52	52	52	51	51	51	51	57
21/F	69.7	64	64	64	65	64	64	64	64	64	64	64	64	55	54	52	52	52	52	52	51	51	51	51	57
22/F	72.7	63	64	64	64	64	64	64	64	64	64	64	64	55	54	52	52	52	52	52	51	51	51	51	57
23/F	75.6	62	64	64	64	64	64	64	64	64	64	64	64	54	53	52	52	52	52	51	51	51	51	51	57
24/F	81.6	63	63	64	64	64	64	64	64	64	64	64	64	54	55	54	52	51	52	51	51	51	51	51	57
25/F	84.6	63	63	64	64	64	64	64	64	64	64	64	64	54	55	53	52	51	52	51	51	51	51	50	56
26/F	87.5	63	63	63	64	64	64	64	64	64	64	64	64	54	55	53	52	51	51	51	51	51	51	50	56
27/F	90.5	63	63	63	64	64	64	64	64	64	64	64	64	54	55	53	52	51	51	51	51	51	51	50	56
28/F	93.5	63	63	63	64	64	64	64	64	64	64	64	64	54	55	53	52	51	51	51	51	51	51	50	56
29/F	96.5	63	63	63	64	64	64	64	64	64	64	64	63	54	54	53	52	51	51	51	51	51	51	50	56
30/F	99.4	63	63	63	64	64	64	64	64	64	64	64	63	54	53	54	53	52	51	51	51	51	51	50	56
31/F	102.4	63	63	63	64	64	64	64	64	64	63	63	63	54	53	52	51	51	51	51	51	51	51	50	56
32/F	105.4	63	63	63	64	64	64	64	64	63	63	63	63	54	54	53	52	51	51	51	51	51	51	50	56
33/F	108.4	63	63	63	64	64	64	64	63	63	63	63	63	54	53	52	51	51	51	51	51	51	51	50	56
34/F	111.3	63	63	63	64	64	64	63	63	63	63	63	63	54	53	52	51	51	51	51	51	51	51	50	56
35/F	114.3	63	63	63	64	63	63	63	63	63	63	63	63	54	53	52	51	51	51	51	51	51	51	50	56
36/F	117.3	63	63	63	63	63	63	63	63	63	63	63	63	54	53	52	51	51	51	51	51	51	51	50	56
37/F	120.3	63	63	63	63	63	63	63	63	63	63	63	63	54	53	52	51	51	51	51	51	51	51	50	56
38/F	123.2	63	63	63	63	63	63	63	63	63	63	63	63	54	53	51	51	51	51	51	51	51	51	50	56
39/F	126.2	63	63	63	63	63	63	63	63	63	63	63	63	54	53	51	51	51	51	51	51	51	51	50	56
40/F	129.2	62	62	63	63	63	63	63	63	63	63	63	63	54	53	51	51	51	51	51	51	51	51	50	56
41/F	132.2	62	62	63	63	63	63	63	63	63	63	63	63	54	53	51	51	51	51	51	51	51	51	50	56
42/F	135.1	62	62	63	63	63	63	63	63	63	63	63	63	54	53	51	50	51	51	51	51	51	51	50	56
43/F	138.1	62	62	63	63	63	63	63	63	63	63	63	63	54	53	51	50	51	51	51	51	51	51	50	56
44/F	141.1	62	62	63	63	63	63	63	63	63	63	63	63	54	52	51	50	51	51	51	51	51	51	50	56
45/F	144.1	62	62	63	63	63	63	63	63	63	63	63	63	54	52	51	50	51	51	51	51	51	51	50	56
46/F	147.0	62	62	63	63	63	63	63	63	63	63	63	63	54	52	51	50	51	51	51	51	51	51	50	56
47/F	150.0	62	62	63	63	63	63	63	63	63	63	63	63	54	52	51	50	51	51	51	51	51	51	50	56
Max Noise Level	64	64	65	66	66	66	66	66	66	66	66	66	66	56	55	54	53	53	53	52	52	52	52	51	57
Exceedance		0				0			0		0				0			0			0		0		

Floor	mPD	T2-01	T2-02	T2-03	T2-04	T2-05	T2-06	T2-07	T2-08	T2-09	T2-10	T2-11	T2-12	T2-13	T2-14	T2-15	T2-16	T2-17	T2-18	T2-19	T2-20	T2-21	T2-22	T2-23	T2-24	T2-25	T2-26	T2-27	T2-28	T2-29	T2-30	T2-31	T2-32	T2-33	T2-34	T2-35	T2-36	T2-37	T2-38	T2-39	T2-40	T2-41	T2-42	T2-43	T2-44	T2-45	T2-46	T2-47			
G/F	7.3	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	54	54	54	54	53	53	53	53	53	52	57	56	56	56	56	57	57	56	56	57	56	54	59				
1/F	10.2	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	54	54	54	54	53	53	53	53	53	52	57	56	56	56	56	57	57	56	56	57	56	54	59				
2/F	13.2	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	54	54	54	54	53	53	53	53	53	52	57	56	56	56	56	57	57	56	56	57	56	54	59				
3/F	16.2	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	54	54	54	54	53	53	53	53	53	52	57	56	56	56	56	57	57	56	56	57	56	55	54	59			
4/F	19.2	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	54	54	54	54	53	53	53	53	53	52	57	56	56	56	56	57	57	56	56	57	56	55	54	59			
5/F	22.1	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	54	54	54	54	53	53	53	53	53	52	57	56	56	56	56	57	57	56	56	57	56	55	54	59			
6/F	25.1	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	54	54	54	54	53	53	53	53	53	52	57	56	56	56	56	57	57	56	56	57	56	55	54	59			
7/F	28.1	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59	
8/F	31.1	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59
9/F	34.0	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59	
10/F	37.0	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59	
11/F	40.0	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59	
12/F	43.0	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59	
13/F	45.9	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59	
14/F	48.9	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59	
15/F	51.9	65	65	65	63	64	64	64	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59		
16/F	54.9	65	64	65	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59		
17/F	57.8	64	64	65	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59		
18/F	60.8	63	65	62	63	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59			
19/F	63.8	65	64	65	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59			
20/F	66.8	65	64	65	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59			
21/F	69.7	64	64	65	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	57	57	56	56	57	56	55	54	59			
22/F	72.7	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	54	58			
23/F	75.7	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	54	58			
24/F	78.7	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	54	58			
25/F	81.6	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	54	58			
26/F	84.6	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	54	58			
27/F	87.6	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	54	58			
28/F	90.6	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	54	58			
29/F	93.5	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	56	54	58		
30/F	96.5	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	56	54	58		
31/F	99.5	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	56	56	54	58	
32/F	102.5	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54	54	57	56	56	56	56	56	56	56	56	56	56	56	56	56	54	58	
33/F	105.4	64	64	64	62	63	63	63	63	63	63	63	62	62	62	62	62	62	62	62	62	62	63	63	63	55	55	54	54	54	54	54	54																		

**Appendix 4.1 Site Survey Record and Derived Sound Power Level of Fixed
Noise Source**

Source ID	Description	Measured SPL, dB(A)	Adopted SPL, dB(A)	Measurement Distance, m	Adopted SWL, dB(A)
R01	Recycling Workshop	65.8	65.7	15	97.2
	Background	47.6		-	





Appendix: 4.1

Title: Site Survey Record

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

RAMBOLL

Drawn by: MK

Checked by: CC

Rev.: 1.0

Date: Aug 2024

Site Survey Photo Record



1. Site office and warehouse with loading and unloading area, no noisy activity or equipment (e.g. forklift) is observed.



2. Ceased factory and no noisy activity or equipment is observed.



3. Warehouse with loading and unloading area, no noisy activity or equipment (e.g. forklift) is observed.



4. Covered warehouse with no noisy activity or equipment (e.g. forklift) is observed.



5. Residential village houses and no potential fixed noise source is observed.



6. Warehouse under construction with no operation is observed. Based on the structure, enclosed warehouse is expected with no potential fixed noise impact.

Site Survey Photo Record



7. Enclosed warehouse with no noisy activity or equipment (e.g. forklift) is observed is observed.



8. Open storage with no noisy activity or equipment (e.g. forklift) is observed



9. Residential village house and no potential fixed noise source is observed.



10. Plant nursery with no noisy activity or equipment (e.g. forklift) is observed.



11. Temporary structure and open storage with with no noisy activity or equipment (e.g. forklift) is observed.



12. Open carpark with no noisy activity or equipment (e.g. forklift) is observed.

Site Survey Photo Record



13. Restaurant with open carpark. No noisy activity or equipment (e.g. forklift) is observed.



14. Open carpark for crane. No noisy activity or equipment (e.g. forklift) is observed.



15a. Farmland with with no noisy activity or equipment (e.g. forklift) is observed.



15b. Farmland with with no noisy activity or equipment (e.g. forklift) is observed.



16. Open carpark and access road for logistic centre. No noisy activity or equipment (e.g. forklift) is observed.



17. Open carpark for unlicensed brand new vehicle. No noisy activity or equipment (e.g. forklift) is observed.

Site Survey Photo Record



18. Residential village house and no potential fixed noise source is observed.



19. Site office with open carpark. No noisy activity or equipment (e.g. forklift) is observed.



20. Residential village houses and no potential fixed noise source is observed.



21. Open storage with no operation is observed.

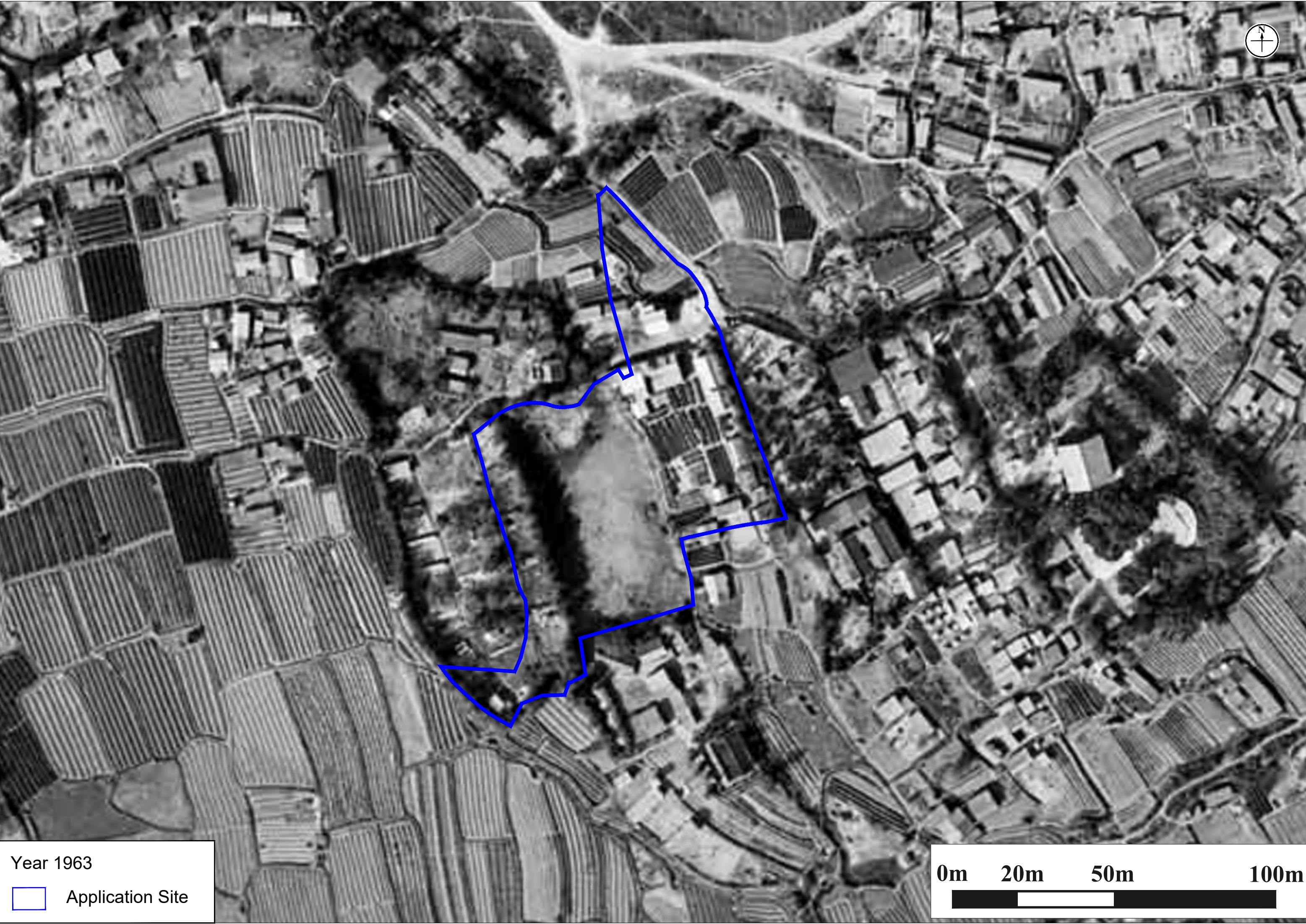
Appendix 5.1 Historic Aerial Photo



Year 1945

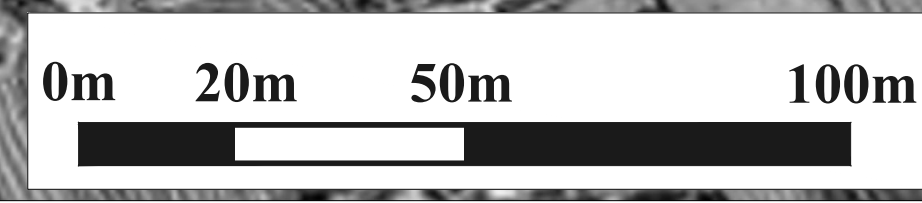
 Application Site

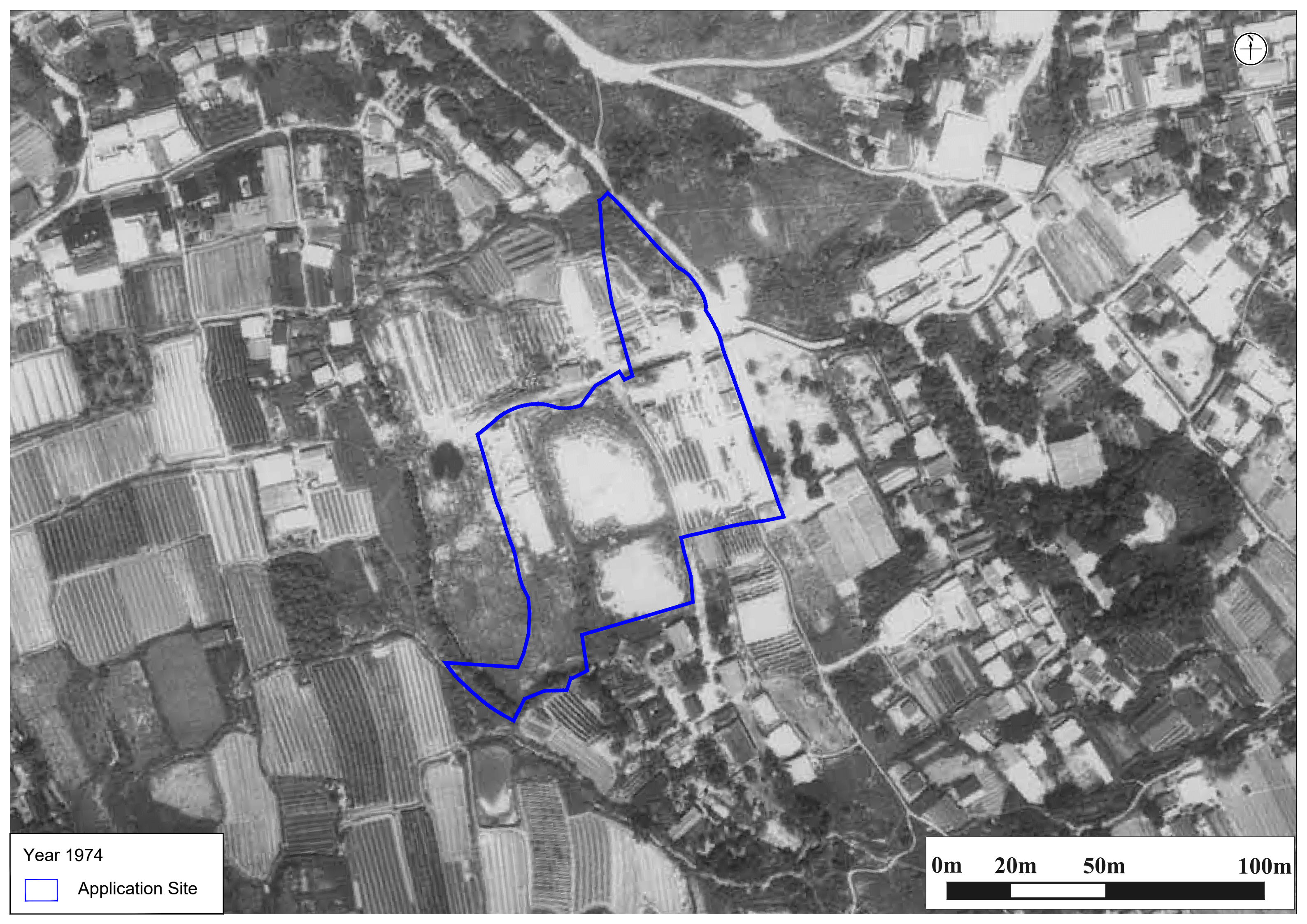




Year 1963

 Application Site

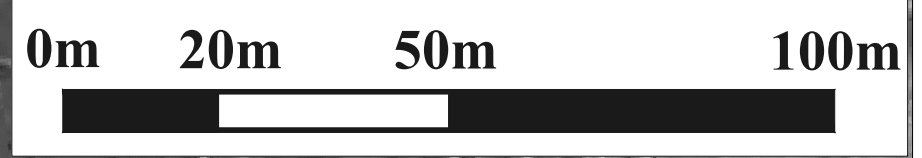


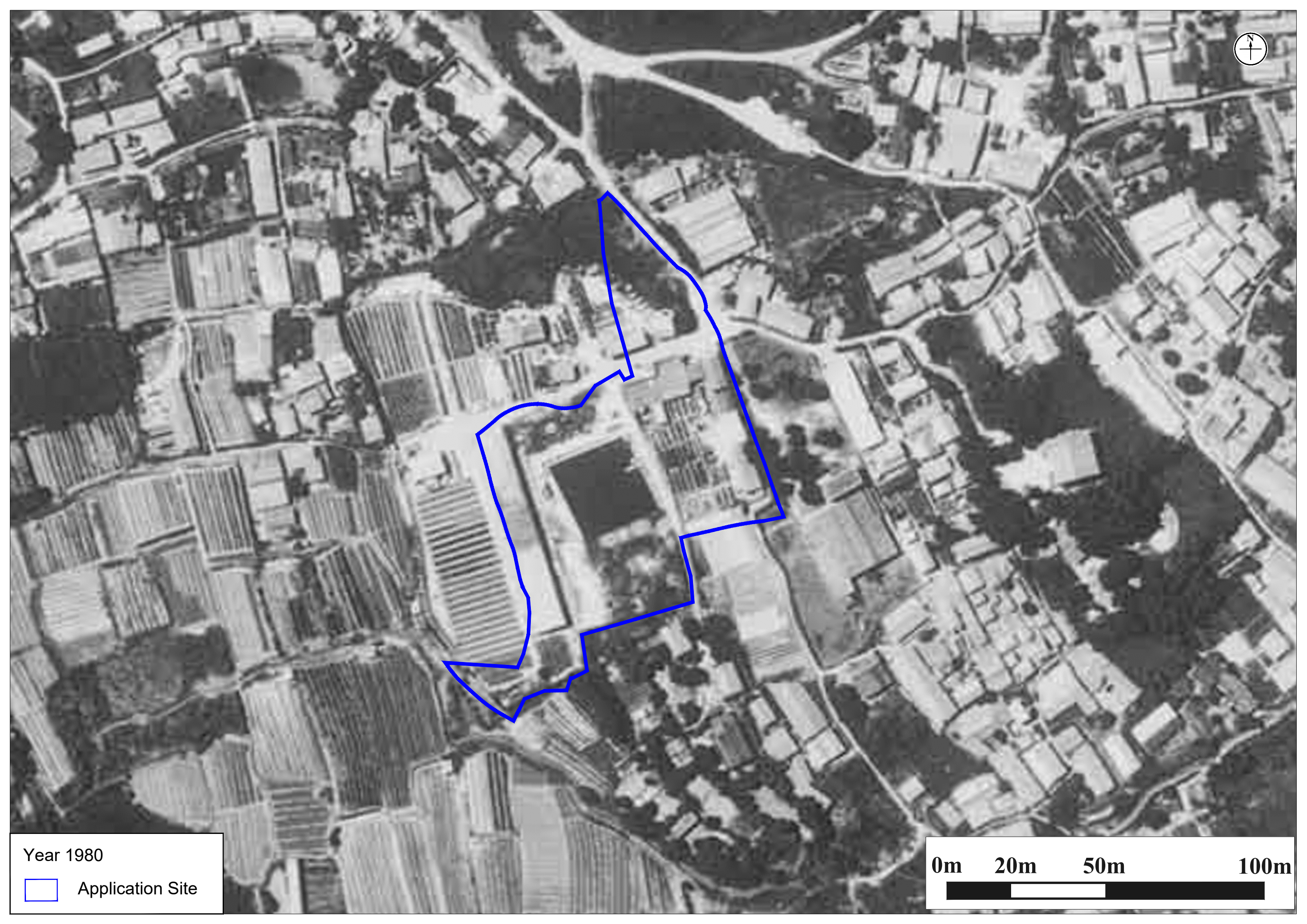


Year 1974



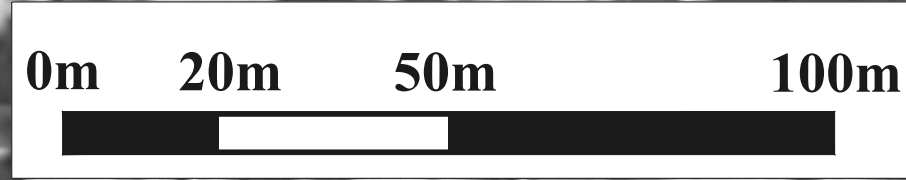
Application Site





Year 1980

 Application Site





Year 1994

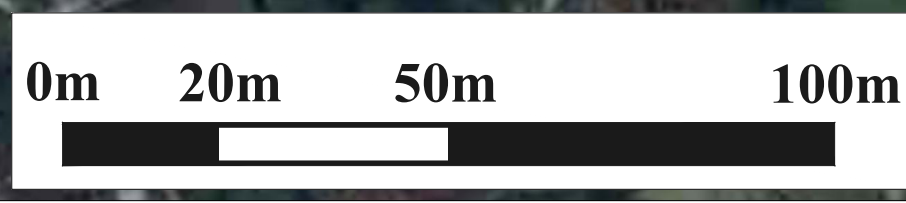
 Application Site





Year 1997

 Application Site





Year 2005



Application Site

0m 20m 50m 100m

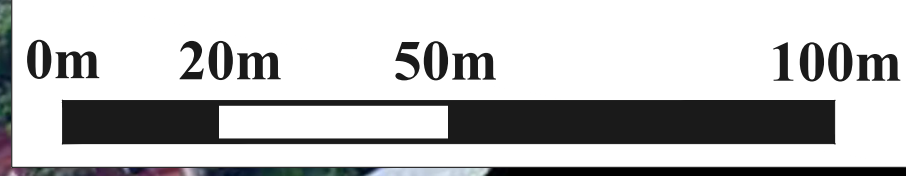




香港特別行政區政府 地政總署測繪處

Year 2009

 Application Site





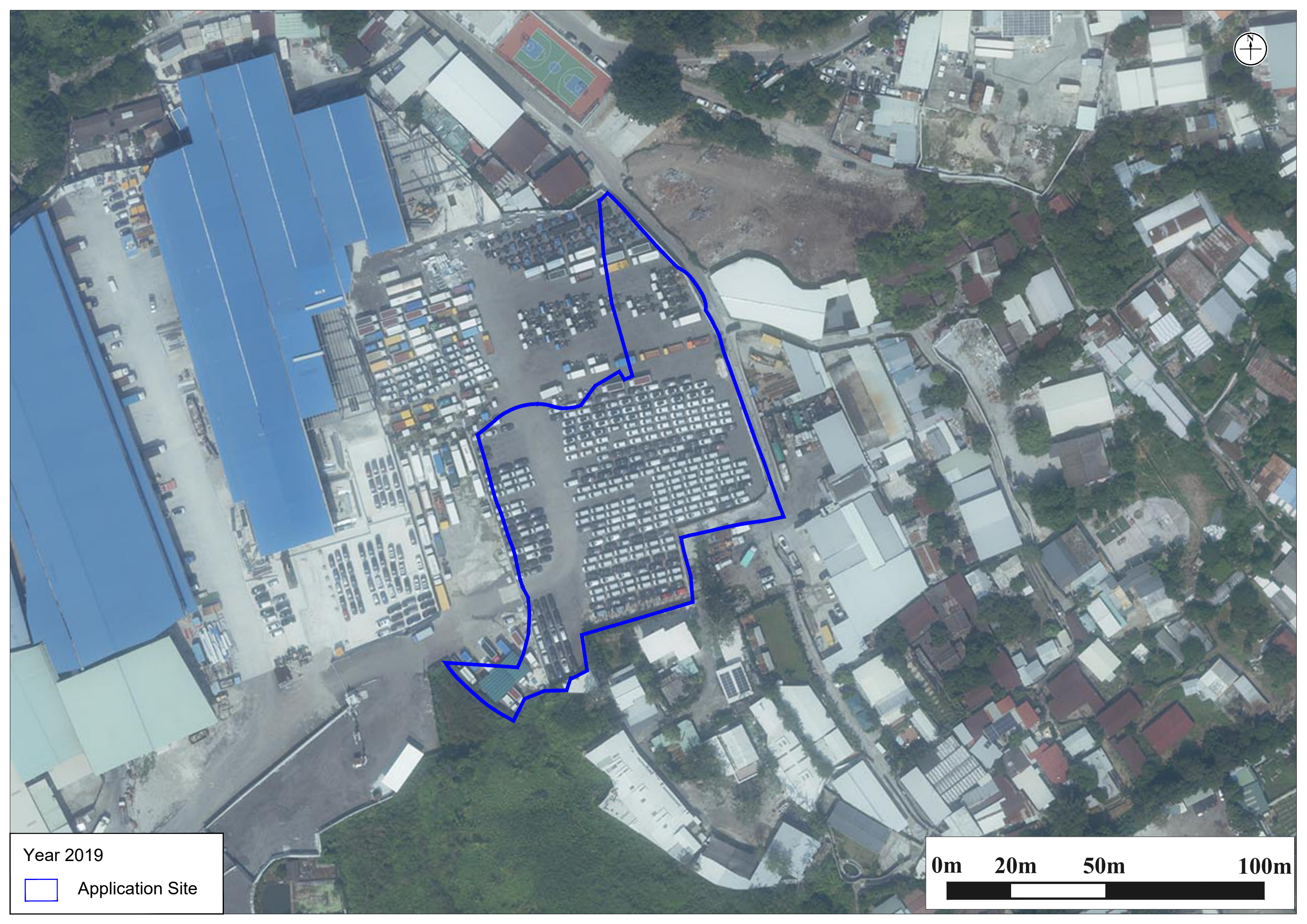
Year 2015



Application Site

0m 20m 50m 100m

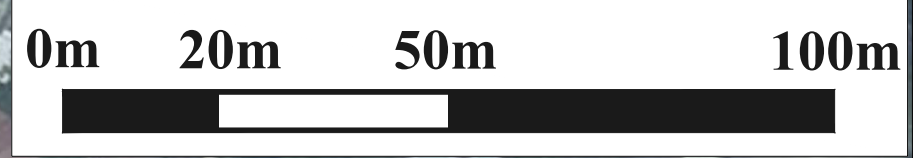




Year 2019



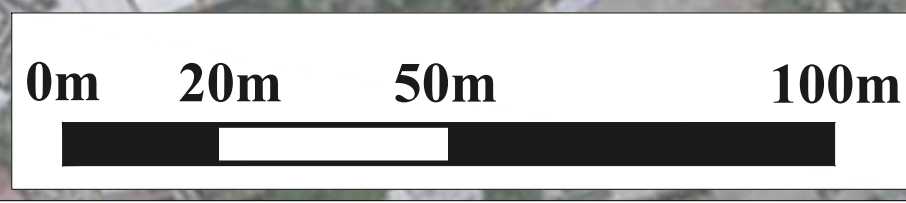
Application Site





Year 2022

 Application Site



Appendix 5.2 Correspondence with Various Departments

Ref.: CKHYLFKHEI00_0_0002L.24

1 February 2024

Planning Department,
District Planning Branch,
New Territories District Planning Division,
Fanling, Sheung Shui & Yuen Long East District Planning Office
Unit 2202, 22/F, CDW Building,
388 Castle Peak Road,
Tsuen Wan, New Territories

By Fax (3168 4074) & Post

Dear Sir / Madam,

Land Contamination Assessment Study for Planning Application for Proposed Residential Development at Various Lots in DD107, Fung Kat Heung, Kam Tin - Enquiry for Land Contamination Information

We are conducting a Land Contamination Assessment Study for Planning Application Proposed Residential Development at Various Lots in DD107, Fung Kat Heung, Kam Tin. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the Government of HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the subject site are required as part of the vetting process.

Of particular interests are current and historical site information, any change on the land use, future land use and any information relating to land contamination issues of the Application Site. A location plan and lot index plan for the project is enclosed for your reference. Due to the tight timeline of the project, we would be much appreciated if you could provide the requested information by **19 February 2024**.

Should you have any query, please do not hesitate to contact the undersigned at 3465 2811 (email: cchiu@ramboll.com) or our Ms. Parisa Tsui at 3465 2868 (email: pcctsui@ramboll.com). We sincerely seek your feedback on this matter.

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Calvin Chiu
Senior Manager

Enclosure: Location of Application Site and Lot Index Plan

Q:\Projects\CKHYLFKHEI00\02 Project Management\02 Corr\CKHYLFKHEI00_0_0002L.24.docx

Environmental Protection Department,
Environmental Compliance Division,
Regional Office (North),
10th floor, Shatin Government Offices,
No.1 Sheung Wo Che Road,
Sha Tin, New Territories

By Fax (2685 1155) & Post

Dear Sir / Madam,

Land Contamination Assessment Study for Planning Application for Proposed Residential Development at Various Lots in DD107, Fung Kat Heung, Kam Tin - Enquiry for Land Contamination Information

We are conducting a Land Contamination Assessment Study for Proposed Residential Development at Various Lots in DD107, Fung Kat Heung, Kam Tin. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the Government of HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Application Site are required as part of the vetting process.

Of particular interests is whether there are any registered chemical waste producers under your record in the Application Site, any waste disposal record, any accidental spillage record, any submission relating to land contamination assessment and any information you could provide which might be useful for our study. A location plan and lot index plan for the project is enclosed for your reference.

Due to the urgency of the project, we would be much appreciated if you could provide the requested information by **19 February 2024**.

Should you have any queries, please do not hesitate to contact the undersigned at 3465 2811 (email: cchiu@ramboll.com) or our Ms. Parisa Tsui at 3465 2868 (email: pcctsui@ramboll.com). We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Calvin Chiu
Senior Manager

Enclosure: Location of Application Site and Lot Index Plan

本署檔案
OUR REF: () EP910/E6/1
來函檔案
YOUR REF: CKHYLFKHEI00_0_0003L24
電話
TEL NO: 2158 5851
圖文傳真
FAX NO: 2650 1133
網址
HOMEPAGE: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (North)
10/F., Shatin Government Offices,
1 Sheung Wo Che Road,
Shatin, N.T.



環境保護署
環保法規管理科
區域辦事處(北)
新界沙田上禾輦路1號
沙田政府合署10樓

(By Fax Only: 3465 2899)

7 February 2024

Ramboll Hong Kong Limited
21/F., BEA Harbour View Centre,
56 Gloucester Road,
Wan Chai, Hong Kong
(Attn.: Calvin CHIU)

Dear Calvin CHIU,

Land Contamination Assessment Study for Planning Application for Proposed Residential
Development at Various Lots in DD107, Fung Kat Heung, Kam Tin -
Enquiry for Land Contamination Information

We refer to your above letter under reference requesting for information for Land Contamination Assessment.

Regarding chemical spillage / incident record, this Regional Office has no record of chemical spillage / leakage incident at the captioned location in the past 3 years. For waste disposal records and submission relating to land contamination, this Regional Office does not keep this information. You may need to check with other relevant parties / departments for such information as appropriate.

For the records of Chemical Waste Producer Registration, a registry of chemical waste producers is available in our Territory Control Office. Should you like to view the records, you may approach Mr. Gordon KWAN at 2835 1027 for making an appointment to view the records.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'TSE Yuet-chuen'.

(TSE Yuet-chuen)

for Director of Environmental Protection

Ref.: CKHYLFKHEI00_0_0004L.24

1 February 2024

Fire Services Department,
Corporate Strategy Command,
Corporate Service Division,
9th Floor, Fire Services Headquarters Building,
1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon

By Fax (2739 5879) & Post

Dear Sir / Madam,

Land Contamination Assessment Study for Planning Application for Proposed Residential Development at Various Lots in DD107, Fung Kat Heung, Kam Tin - Enquiry for Land Contamination Information

We are conducting a Land Contamination Assessment Study for Planning Application for Proposed Residential Development at Various Lots in DD107, Fung Kat Heung, Kam Tin. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the Government of HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Application Site are required as part of the vetting process.

Of particular interests are spill and incident reports (including records of fire at the Application Site) that we believe your Department might have record of. Furthermore, we would also like to know whether anywhere of the Application Site had applied or possessed license for dangerous goods storage. A location plan and lot index plan of the project is enclosed for your reference. Appointment letter from the applicant is also provided.

Due to the urgency of the project, we would be much appreciated if you could provide the requested information by **19 February 2024**.

Should you have any queries, please do not hesitate to contact the undersigned at 3465 2811 (email: cchiu@ramboll.com) or our Parisa Tsui at 3465 2868 (email: pcctsui@ramboll.com). We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Calvin Chiu
Senior Manager

Enclosure: Location of Application Site, Lot Index Plan and Appointment Letter

Q:\Projects\CKHYLFKHEI00\02 Project Management\02 Corr\CKHYLFKHEI00_0_0004L.24.docx

ALEX DEVELOPMENT LIMITED

30th January 2024

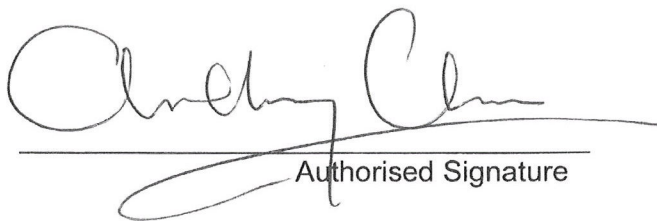
Ramboll Hong Kong Limited
21/F, BEA Harbour View Centre
56 Gloucester Road
Wan Chai, Hong Kong

Dear Sir/Madam,

**Proposed Residential Development at
Various Lots in DD107, Fung Kat Heung, Kam Tin
Section 12A Amendment of Plan Application**

Please note that Ramboll Hong Kong Limited has been commissioned to provide environmental consultancy services for the captioned proposed development.

Yours faithfully
For and on behalf of
ALEX DEVELOPMENT LIMITED



Authorized Signature

消防處

香港九龍尖沙咀東部康莊道1號
消防處總部大廈



FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 OUR REF. : (205) in FSD GR 6-5/4 R Pt. 51
來函檔號 YOUR REF. : CKHYLFKHEI00_0_0004.L.24
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2988 1196
電話 TEL NO. : 2733 5848

RECEIVED
07 MAR 2024

By: _____

5 March 2024

Ramboll Hong Kong Limited
21/F, BEA Harbour View Centre,
56 Gloucester Road,
Wanchai, Hong Kong.
(Attn: Mr Calvin CHIU, Senior Manager)

Dear Mr. CHIU,

**Land Contamination Assessment Study
for Planning Application for Proposed Residential Development
at Various Lots in DD107, Fung Kat Heung, Kam Tin
Request for Information of Dangerous Goods & Incident Records**

I refer to your letter of 1.2.2024 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.

Ramboll Hong Kong

Yours sincerely,

Project:	CKHYLFKHEI00_0_0010.L.24		
Maconomy no.:	308001355		
Circulation:	Read	Action	
CC	☒	☐	☐
Peter	☒	☐	☐
Mike	☐	☐	☐
Anna	☐	☐	☐
	Yes	No	
Document Scan	☐	☐	
Keep Hard Copy	☐	☐	

(TSANG Chun-hei)
for Director of Fire Services

Lands Department
Land Administration Office
District Lands Office, Yuen Long
7th-11th floors, Yuen Long Government Offices
2 Kiu Lok Square,
Yuen Long, New Territories

By Fax (2473 3134) & Post

Dear Sir / Madam,

Land Contamination Assessment Study for Proposed Residential Development at Various Lots in DD107, Fung Kat Heung, Kam Tin - Enquiry for Land Contamination Information

We are conducting a Land Contamination Assessment Study for Proposed Residential Development at Various Lots in DD107, Fung Kat Heung, Kam Tin. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the Government of HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Application Site are required as part of the vetting process.

Of particular interests are information on spillage accidents, illegal/contaminating land uses or uncontrolled dumping uses, current and historical land use information, previous short-term tenancy and any information relating to land contamination issues of the Application Site. A location plan and lot index plan of the project is enclosed for your reference.

Due to the urgency of the project, we would be much appreciated if you could provide the requested information by **19 February 2024**.

Should you have any queries, please do not hesitate to contact the undersigned at 3465 2811 (email: cchiu@ramboll.com) or our Ms. Parisa Tsui at 3465 2868 (email: pcctsui@ramboll.com). We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Calvin Chiu
Senior Manager

Enclosure: Location of Application Site and Lot Index Plan

RECEIVED
28 FEB 2024

BY: _____



地政總署
元朗地政處

DISTRICT LANDS OFFICE/ YUEN LONG
LANDS DEPARTMENT

電話 Tel: 2443 3160

圖文傳真 Fax: 2473 3134

電郵地址 Email: gendloyl@landsd.gov.hk

本署檔號 Our Ref: (2) in DLOYL 23/MS/2024

來函檔號 Your Ref: CKHYLFKHEI00_0_0005L.24

來函請註明本署檔號

Please quote our reference in your reply

我們矢志努力不懈，提供盡善盡美的土地行政服務。
We strive to achieve excellence in land administration.

新界元朗橋樂坊二號元朗政府合署七樓至十一樓
7/F - 11/F, YUEN LONG GOVERNMENT OFFICES,
NO. 2 KIU LOK SQUARE, YUEN LONG, N.T.

網址 Website : www.landsd.gov.hk

Ramboll Hong Kong Limited
21/F, BEA harbor View Centre
56 Gloucester Road
Wan Chai
Hong Kong

Dear Sir,

**Enquiry for Land Contamination Information of
Land Contamination Assessment Study for Proposed Residential Development
Various Lots in D.D. 107, Fung Kat Heung, Kam Tin Heung, Yuen Long**

I refer to your letter dated 1st February 2024.

This office is not responsible for handling incidents, activities and accidents arising from environmental issues in private lots. As such, I regret that I have no information to provide.

If you have any questions, please feel free to contact me at 2443 3160.

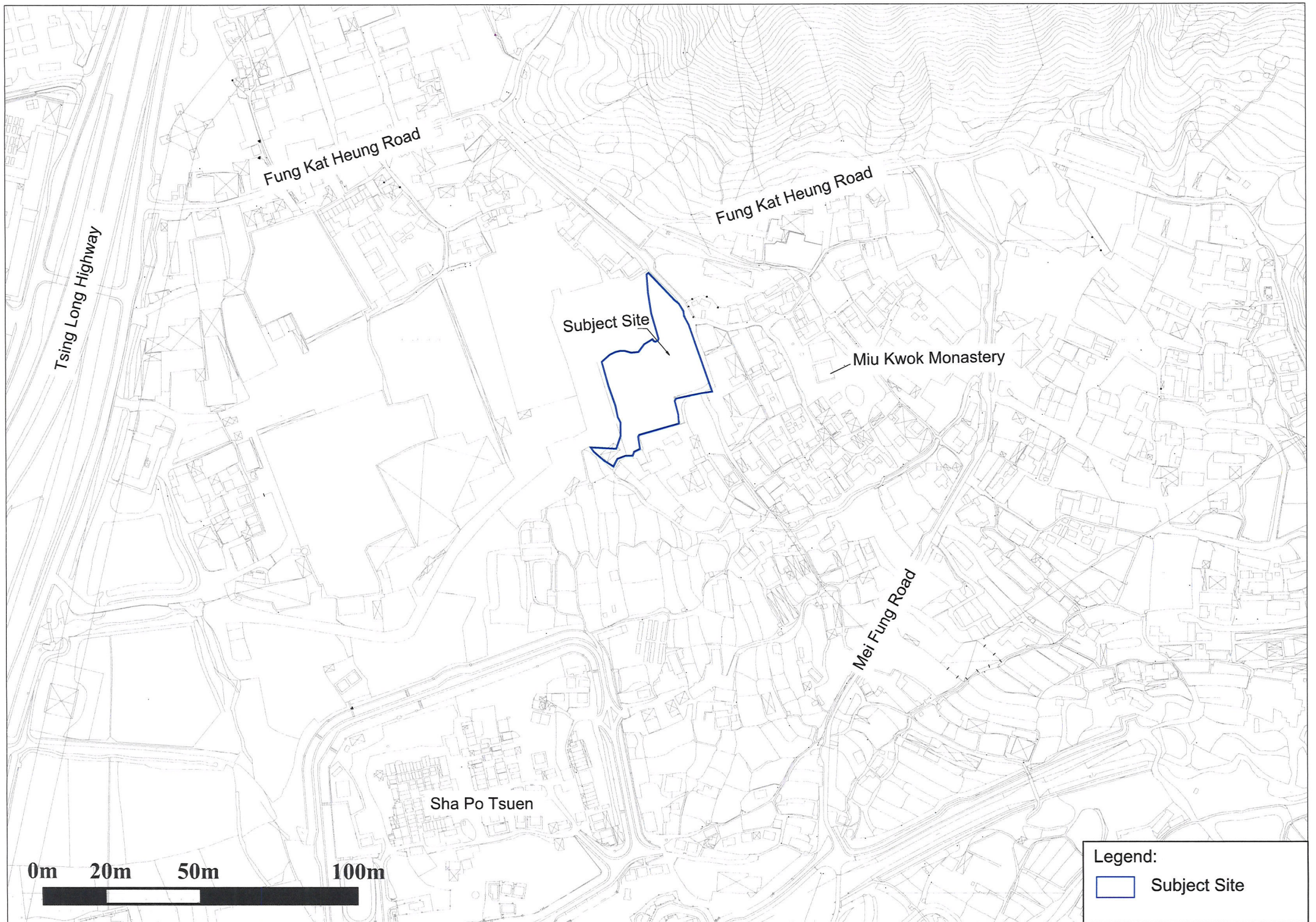
Yours faithfully,

(H.K. CHENG)

for District Lands Officer, Yuen Long

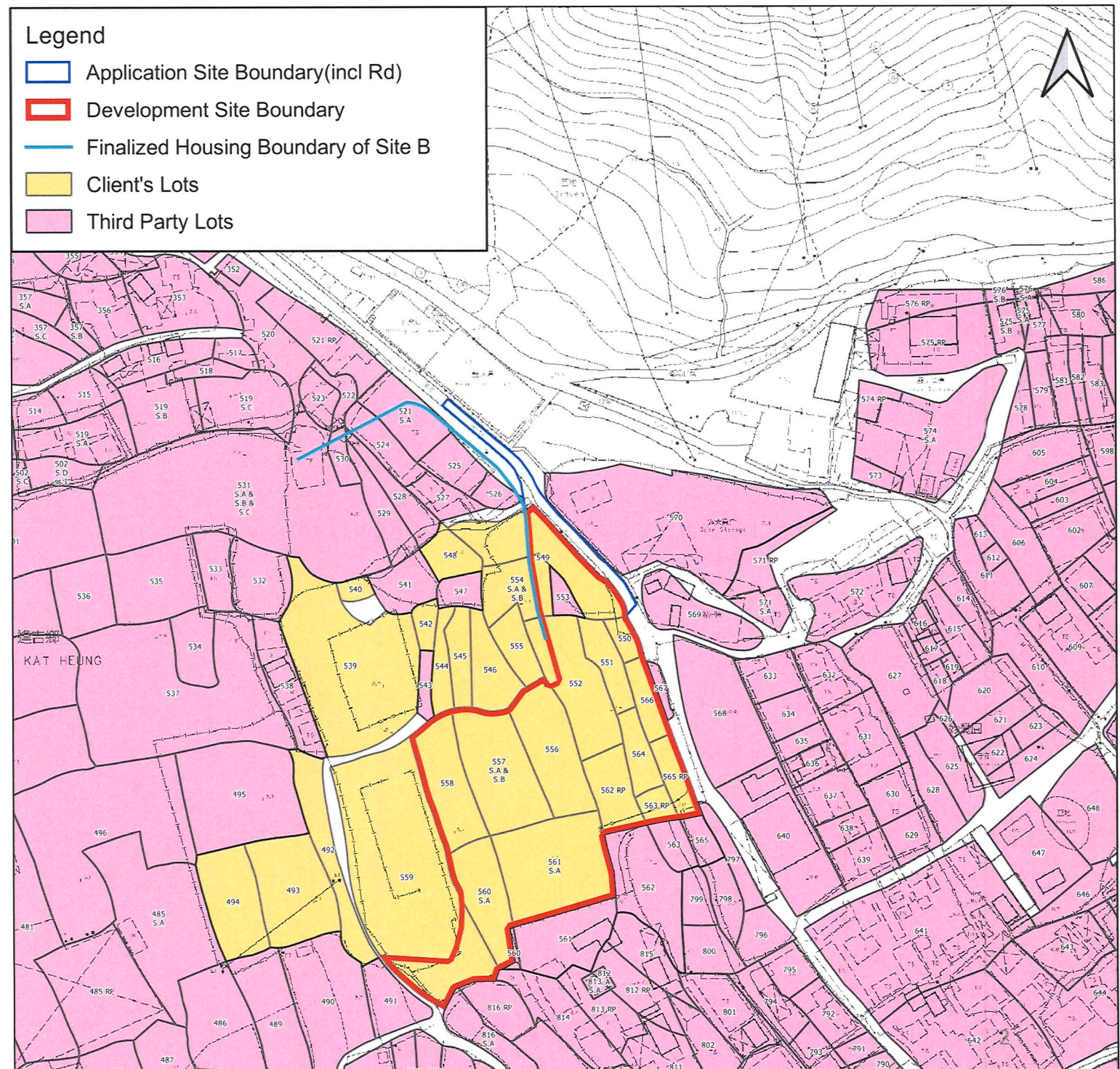
Ramboll Hong Kong Ltd.

Project:	CKHYLFKHEI00_0_0009L.24		
Maconomy no.:	328001355		
Circulation:	Read	Action	
CC	☒	☐	☐
Peter	☒	☐	☐
Mjko	☐	☐	☐
Mrs. W	☐	☐	☐
	Yes	No	
Document Scan	☐	☐	☐
Keep Hard Copy	☐	☐	☐



Landholding Plan

Lot Index Number including:
Lot 549, 550, 551, 552, 556,
557 S.A & S.B, 558, 559,
560 S.A, 561 S.A, 562 RP,
563 RP, 564, 565RP, 566



Appendix 5.3 Screen Capture of BRAVO

Appendix 5.4 Walkover Checklist

Site Walkover Checklist

GENERAL SITE DETAILS

SITE OWNER/CLIENT Alex Development Limited

PROPERTY ADDRESS Various Lots in DD107, Fung Kat Heung, Kam Tin, New Territories

PERSON CONDUCTING THE QUESTIONNAIRE

NAME Parisa Tsui

POSITION Assistant Environmental Consultant (Ramboll Hong Kong Limited)

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME Kenny Chan (Client Representative)

POSITION Engineer (Alex Development Limited)

TELEPHONE 2122 2024

SITE ACTIVITIES

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

Number of employees:	Full-time: -
	Part-time: -
	Temporary/Seasonal: -
Maximum no. of people on site at any time:	30
Typical hours of operation:	Daytime
Number of shifts:	-
Days per week:	6
Weeks per year:	45
Scheduled plant shut-down:	-

Detail the main sources of energy at the site:

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

SITE DESCRIPTION

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

What is the total site area: Approximately 7290m²

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

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

Previous Occupiers: N/A

Current Occupiers: Allex Development Limited, third party, and Government

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: 溢峰(香港)有限公司

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

North: Commercial: Car in Life International (Hong Kong) Ltd
Carriageway: Access Road and Fung Kat Heung Road

South: Residential: Village houses

East: Industrial: Green Strength Technology Limited; Carriageway: Access Road
Residential: Village houses

West: Industrial: RollShip Autolink Logistics Center, Yusen Logistics (Hong Kong) Limited

Site Walkover Checklist

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.

Scattered temporary structures (village house development)

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

Conservation area and Lam Tsuen Country Park at the north and northeast of the Application Site

Questionnaire with Existing/Previous Site Owner or Occupier

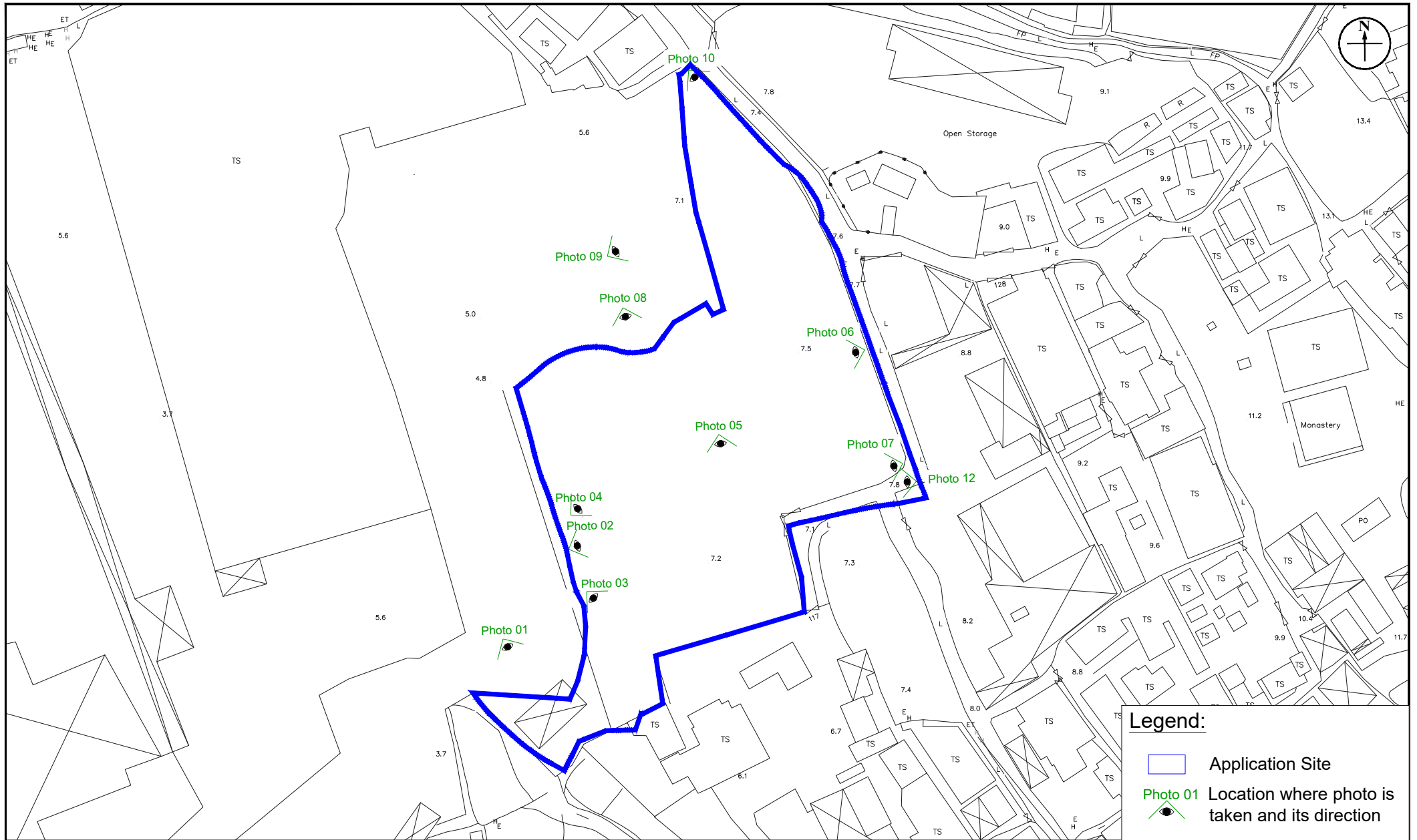
Ref.		Yes/No	Notes
1.	What are the main activities/operations at the above address?	-	Open carpark
2.	How long have you been occupying the site?	-	6 years (Since 2019)
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy?)	Yes	Vacant area
4.	Prior to your occupancy, who occupied the site?	-	-
5.	What were the main activities/operations during their occupancy?	-	Car park
6.	Have there been any major changes in operations carried out at the site in the last 10 years?	Yes	The site was paved and became open carpark
7.	Have any polluting activities been carried out in the vicinity of the site in the past?	No	-
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 ordinances? (If yes, please provide details.)	No	-
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	No	-
	• Where do you store these chemicals?	-	-
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	-

Ref.		Yes/No	Notes
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)?	No	The site is used for vehicle open storage. No such materials are processed on the site.
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	-
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	No	No chemicals are handled on the site.
19.	How are the wastes disposed of?	-	There is a tank outside the Application Site to collect the domestic waste.
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 underground tanks on site.
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

1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	No	No chemical observed onsite
2.	What are the conditions of the bund walls and floors?	No	-
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?	Yes	There is a tank outside the Application Site to collect the domestic waste.
6.	Is there an on-site landfill?	No	-
7.	Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	-
8.	Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	-
9.	Are there any potential off-site sources of contamination?	No	-
10.	Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	No	-
11.	Are there any sumps, effluent pits, interceptors or lagoons on site?	No	-
12.	Any noticeable odours during site walkover?	No	-
13.	Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	No	-

Appendix 5.5 Photo Records



Legend:

- Application Site
- Photo 01 → Location where photo is taken and its direction

Appendix: 5.5

Title: Site Survey Record Plan

Project: Proposed Residential Development at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

RAMBOLL

Drawn by: PT

Checked by: CC

Rev.: 1.0

Date: Feb 2024

Photo Records



Photo 1: Paved area for parking



Photo 2: Paved area for parking



Photo 3: Paved area for parking



Photo 4: Paved area for parking



Photo 5: Paved area for parking



Photo 6: Paved area for parking



Photo 7: Paved area for parking



Photo 8: Paved area for parking



Photo 9: Paved area for parking



Photo 10: Paved area for parking



Photo 11: Boundary wall of the open car park

