

Annex A

Replacement Pages of Environmental Assessment

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. Based on discussion between Project Traffic Consultant and TD, Fung Kat Heung Road and access roads are not under TD's management and TD will not comment on the road type. Since these roads connecting villages or more remote settlements to

Rural Roads, according to Volume 2 Chapter 3.2 of Transport Planning and Design Manual (TPDM) published by TD, these roads are feeder roads as advised by Project Traffic Consultant. 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, 01 August 2024, and 24 June 2025 to identify any environmental nuisance and focus on area within 500m from the Application Site. An additional site survey was conducted on 19 December 2025 to confirm the findings on the potential air quality and odour sources. 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. An additional site survey was conducted on 19 December 2025 to confirm the findings on the potential fixed noise sources.

Aircraft/ Helicopter Noise Impact

- 1.4.6 There is aircraft/ helicopter operations at the Shek Kong Airfield around 2.6km apart to the southeast of the Application Site. While there is long separation from the airfield, noise due to its operation may be audible. As a prudent approach, the future façade glass panel thickness will be at least 6mm in order to provide better insulation so that a more silent indoor environment can be provided and therefore potential aircraft/ helicopter noise issues are not anticipated.

Water Quality Impact

- 1.4.7 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

- 1.4.19 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

- 1.4.20 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. Based on discussion between Project Traffic Consultant and TD, Fung Kat Heung Road and access roads are not under TD's management and TD will not comment on the road type. Since these roads connecting villages or more remote settlements to Rural Roads, according to Volume 2 Chapter 3.2 of Transport Planning and Design Manual (TPDM) published by TD, these roads are feeder roads as advised by Project Traffic Consultant. Therefore, the road work is limited to feeder road construction which would not be district distributor or higher. 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.
- 1.4.21 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).
- 1.4.22 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

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, 01 August 2024, 24 June 2025 and 19 December 2025 to identify any environmental nuisance and focus on area within 500m from the Application Site.
- 2.2.2 Potential emission sources within the 500m **assessment** area have been identified and discussed below. 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 buffer distance 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 **lard** 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**. An additional site survey was conducted on 19 December 2025 and it is confirmed the findings on 24 June 2025 is still valid. 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 **assessment** 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. Other than this, Sha Po Sewage Pumping Station is identified about 300m to the west of the Application Site. Yet, no emission other than residual odour emission from ventilation system is expected and discussed in subsequent section.

- 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. Given there is no odour related to sewage detected at the Application Site boundary and 200m buffer distance requirement according to HKPSG Chapter 9 Environment can be fulfilled, no adverse air quality or odour impact will be 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 located over 500m 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. An additional site survey was conducted on 19 December 2025 for updating the latest condition of Miu Kwok Monastery. According to the observations, the condition of Miu Kwok Monastery was same as before. Therefore, the previous findings are considered as valid. Odour from

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 5OU. Under fallback option an onsite STP is proposed. The design ADWF of the proposed STP under fallback option would be below the design ADWF of Sha Tau Kok STW, and it is assumed that odour treatment facilities of at least same efficiency as Sha Tau Kok STW will be used. Moreover, the separation of exhaust of this proposed STP from air sensitive uses will be at least 25m as depicted in **Figure 2.3** which is greater than 20m for Sha Tau Kok STW. Therefore, it is anticipated that the odour impact generated from the proposed STP could be mitigated with similar mitigation measures proposed and adopted for Sha Tau Kok Sewage Treatment Works.

- 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. Based on discussion between Project Traffic Consultant and TD, Fung Kat Heung Road and access roads are not under TD's management and TD will not comment on the road type. Since these roads connecting villages or more remote settlements to Rual Roads, according to Volume 2 Chapter 3.2 of Transport Planning and Design Manual (TPDM) publish by TD, these roads are feeder roads as advised by Project Traffic Consultant. Even though given that there is no specific requirement for the feeder road's buffer distance under HKPSG, 5m buffer distance will be provided between the roads and the air sensitive uses 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 as far as practicable.

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 **assessment** 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 from 2019 to 2024. Based on the above, no adverse odour impact from the identified potential odour sources within assessment 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.