

**Responses to Comments on
Final Preliminary Environment Assessment Report (Issue 1)**

1. Environmental Protection Department, Environmental Assessment Division, Territory North Group [from Mr. Kidman KONG via email dated 17 May 2023] 1

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Territory North Group [from Mr. Kidman KONG via email dated 17 May 2023]

Comments	Responses
1. Section 6.1.6 – Please note that the latest Practice Note for Control of Air Pollution in Semi-Confined Public Transport Interchanges (ProPECC PN1/22) has been published. The applicant should follow the latest ProPECC PN 1/22 for the design and operation of the PTI. Please revise this section and update Table 6.4 accordingly.	Noted and revised accordingly.
2. Section 6.2.1 and R-t-C 2(i) – TD's endorsement for the road type of the proposed access roads could not be found in the report. Please follow up and supplement.	Noted. The no comments record from TD is attached in Appendix 4.1.

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6 AIR QUALITY IMPACT

6.1 Environmental Legislation, Policies, Standards and Criteria

Air Pollution Control Ordinance (Cap. 311)

6.1.1 The Air Pollution Control (Amendment) Ordinance 2021 specifies Air Quality Objectives (AQOs), which are statutory limits for a number of pollutants, and the maximum number of times that they may be exceeded in a year for specified averaging periods. The prevailing AQOs, shown in **Table 6.1**, became effective since 1 January 2022 and are subject to review every five years.

Table 6.1 The Hong Kong Air Quality Objectives

Pollutant	Averaging Time	Concentration Limit ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	Number of Exceedances allowed per year
Sulphur dioxide, SO ₂	10-minute	500	3
	24-hour	50	3
Respirable suspended particulates, RSP (PM ₁₀) ⁽²⁾	24-hour	100	9
	Annual	50	Not applicable
Fine suspended Particulates, FSP (PM _{2.5}) ⁽³⁾	24-hour	50	35 (18) ⁽⁴⁾
	Annual	25	Not applicable
Nitrogen dioxide, NO ₂	1-hour	200	18
	Annual	40	Not applicable
Ozone, O ₃	8-hour	160	9
Carbon monoxide, CO	1-hour	30,000	0
	8-hour	10,000	0
Lead	Annual	0.5	Not applicable

Notes:

- (1) All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to 293 K and 101.325 kPa
- (2) Respirable suspended particulates in air with a nominal aerodynamic diameter of 10 μm or less
- (3) Fine suspended particulates in air with a nominal aerodynamic diameter of 2.5 μm or less
- (4) The number of exceedances allowed per year is 35. However, for Government projects, a more stringent standard shall be applied with the number of allowable exceedances of 18 days per year.

Hong Kong Planning Standards and Guidelines (HKPSG)

6.1.2 The Hong Kong Planning Standards and Guidelines (HKPSG) is a Government manual of criteria for determining the scale, location and site requirements of various land uses and facilities. The purpose of the HKPSG is to provide general guidelines to ensure that, during the planning process, the Government will reserve adequate land to facilitate social and economic development and provide appropriate public facilities to meet the needs of the public.

6.1.3 Table 3.1 of the HKPSG provides the broad guidelines for locating active open spaces close to potentially polluting uses, viz. road traffic. The recommended buffer distances are reproduced in **Table 6.2**.

Table 6.2 Recommended Minimum Buffer Distance from Roads

Pollution Source	Parameter	Buffer Distance	Permitted Uses
Road and Highways	Type of Road		
	Trunk Road and Primary Distributor	> 20 m	Active and passive recreation uses
		3 – 20 m	Passive recreational uses
		< 3 m	Amenity areas
	District Distributor	> 10 m	Active and passive recreational uses
		< 10 m	Passive recreational uses
	Local Distributor	> 5 m	Active and passive recreational uses
< 5 m		Passive recreational uses	
Under Flyovers	-	Passive recreational uses	

Source: HKPSG Table 3.1: Guidelines on Usage of Open Space Site

- 6.1.4 Table 3.1 of the HKPSG also provides the broad guidelines for locating active open spaces close to potentially polluting uses, viz. industrial chimneys emissions. The recommended buffer distances are reproduced in **Table 6.3**.

Table 6.3 Recommended Minimum Buffer Distance from Industrial Chimneys

Pollution Source	Parameter	Buffer Distance	Permitted Uses
Industrial Areas	Difference in Height between Industrial Chimney Exit and the Application Site		
	< 20 m	> 200 m	Active and passive recreation uses
		5 – 200 m	Passive recreational uses
	20 m – 30 m (*)	> 100 m	Active and passive recreational uses
		5 – 100 m	Passive recreational uses
	30 m – 40 m	> 50 m	Active and passive recreational uses
5 – 50 m		Passive recreational uses	
> 40 m	10 m	Active & Passive recreational uses	

Source: HKPSG Table 3.1: Guidelines on Usage of Open Space Site

Notes:

- (1) In situations where the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purpose and refine as and when more information is available.
- (2) The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.
- (3) The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishments which are likely to be significant air pollution sources.
- (4) Amenity areas are permitted in any situation.

- 6.1.5 Section 3.3.10 of the HKPSG recommends that a buffer distance of at least 200m from the air sensitive receivers (ASRs) should be provided for odour sources.

Public Transport Interchange Air Quality Guideline

- 6.1.6 A covered public transport interchange (PTI) has been proposed for the Development. According to Section 4.5 of the HKPSG, the design of the PTI should make reference to EPD's *Practice Note for Professional Persons for Control of Air Pollution in Semi-confined Public Transport Interchanges (ProPECC PN 1/22)*. Maximum allowable concentrations in the PTI have been recommended for several concerned air pollutants and are outlined in **Table 6.4** below. The exhaust (if any) of the covered PTI shall be located away from any air-sensitive

uses as far as possible.

Table 6.4 Public Transport Interchange Air Quality Guideline

Air Pollutant	Maximum Concentration not to be Exceeded ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	
	1-hour Average	
Carbon Monoxide (CO)	30,000	
Nitrogen Dioxide (NO ₂)	200	

Source: ProPECC PN 1/22 Table 1: Air Quality Guidelines

Note: (1) Expressed at the reference condition of 25°C and 101.325 kPa.

Carparks Air Quality Guideline

- 6.1.7 Carparks have been proposed for the Development. The design and operation of the proposed carparks should make reference to EPD's *Practice Note for Professional Persons for Control of Air Pollution in Car Parks (ProPECC PN 2/96)* such that the air quality guidelines set out in the *ProPECC PN 2/96* as summarized in **Table 6.5** are met under all conditions. The exhaust (if any) of the proposed car park shall be located away from any air-sensitive uses as far as possible.

Table 6.5 Carparks Air Quality Guideline

Air Pollutant	Maximum Concentration not to be Exceeded ⁽¹⁾		
	Averaging time	In $\mu\text{g}/\text{m}^3$	In ppm
Carbon Monoxide (CO)	5 minutes	115,000	100
Nitrogen Dioxide (NO ₂)	5 minutes	1,800	1

Source: ProPECC PN 2/96

Note: (1) Expressed at the reference condition of 25°C and 101.325 kPa.

6.2 Vehicular Emissions

- 6.2.1 The design of the Development has incorporated appropriate setback distance from the road network. Yuen Long Highway is the only existing road in close vicinity to the Development. According to the Annual Traffic Census (ATC) 2021 published by the TD, Yuen Long Highway is an Expressway. Access roads have been proposed for the Development. As advised by the Project Traffic Consultant and adopted in the PER, the proposed access roads are classified as Local Distributors, this classification has been approved by TD via email, dated 18 April 2023 (see Email Report attached in Appendix 4.1). As presented in **Table 6.2**, HKPSG's minimum requirements on the buffer distances from Yuen Long Highway (classified as Expressway) and the proposed access roads (classified as Local Distributor) are 20 m and 5 m respectively. **Figure 6.1** shows that all ASRs within the Application Site satisfy both requirements recommended in the HKPSG, except a small area of the podium near Block 1 and a small area of the podium near Block 4. There should not be any air sensitive uses (such as window opening for ventilation and fresh air intake) including recreation uses in open space located within the buffer distance. With the buffer distance requirement incorporated into the future design of the Proposed Development by HKHA, adverse impact from vehicular emission to the planned ASRs is not anticipated.

6.3 Odour Emissions

- 6.3.1 NWNT RTS located ~200 m west to the Application Site has been identified as the only potential source of odour located within 500 m from the Proposed Development. The major sources of odour at NWNT RTS are the waste tipping hall and the wastewater treatment plant

which are both located inside a fully enclosed tipping hall building and installed with odour removal units and maintained with negative pressure. Stringent odour management measures are implemented at NWNT RTS. The HKPSG's recommended buffer distance for odorous uses is 200 m. As shown in **Figure 6.2**, the residential blocks are located beyond 200 m from NWNT RTS, satisfying HKPSG's recommended buffer distance for odour. Part of the Application Site is within the 200 m radius from NWNT RTS. There should not be any air sensitive uses (such as window opening for ventilation and fresh air intake, etc.) including recreation uses in open space located within the buffer distance. Adverse impact from odour from NWNT RTS to the planned ASRs is not anticipated provided that no air sensitive uses would be located within the 200m buffer distance from the RTS.

- 6.3.2 Potential odour impact may also arise from transportation of collected refuse to and from NWNT RTS on the Proposed Development. As stipulated in the Amendment to Cap 354L Waste Disposal (Designated Waste Disposal Facility) Regulation, Refuse Collection Vehicles (RCVs) entering landfills or RTSs are statutorily required to be equipped with a metal tailgate cover and a waste water sump tank. The tailgate cover and the waste water sump tank must be suitably constructed and designed following the "Guidelines on the Design and Construction of Metal Tailgate Cover and Waste Water Sump Tank installed on Refuse Collection Vehicle", and in good working condition. The hopper and the compactor on the RCVs shall be enclosed by the metal tailgate cover to effectively mitigate the spread of odour. The operation of the RCVs shall following the "Code of Practice on the Operation of Refuse Collection Vehicles (RCVs)" compiled by EPD. With proper operation of RCVs, odour impact from the transportation of collected refuse to and from NWNT RTS using the RCVs is anticipated to be insignificant. In addition, the RCVs will be moving on the road. Therefore, odour impact from the transportation of collected refuse to and from NWNT RTS, if any, will be transient and temporary only.
- 6.3.3 Based on the Project Profile for LTNE development (Project Profile No. PP-642/2022), NWNT RTS would be relocated within the project site of the LTNE development. The engineering feasibility of the development including the relocation of NWNT RTS is still being studied. Thus, no detailed information including the proposed location and timeline of the relocation is available at this stage of the study. NWNT RTS constitute a Designated Project (DP) under the Environmental Impact Assessment Ordinance (EIAO), thus, its relocation would require a submission under the EIAO. Relevant odour emission from the relocated NWNT RTS to the Proposed Development shall be assessed under the statutory EIAO submission for NWNT RTS and/or other environmental deliverable under the LTNE study, if any, to ensure that no nearby ASRs including the Proposed Development will be subject to adverse odour impact from the operation of the relocated NWNT RTS.
- 6.3.4 Refuse collection points (RCPs) and a wet market are proposed for the Proposed Development. The detailed designs of the RCPs and wet market are unavailable at this stage of the study. In order to alleviate the potential odour impact from these facilities, mechanical ventilation and odour removal system will be provided for the RCPs and wet market to remove malodour in air discharged from these facilities. The ventilation exhausts will be designed to locate and orient away from the nearby ASRs as far as practicable. In addition, the RCPs will be properly cleansed immediately after each collection operation. Like other public RCPs, operational guidelines and monitoring mechanisms, such as regular checks and surprise inspections, by the Food and Environmental Hygiene Department (FEHD) will be in place to ensure proper operation of the RCPs. For the wet market, a sufficiently designed mechanical ventilation system will be provided. Similar to the arrangement for the RCPs, the ventilation exhausts for the wet market will be designed to locate and orient away from the

APPENDIX 4.1

TD' No Comment Record for Proposed Road Type

From: Victor YK MA <ykma@td.gov.hk>
Sent: Tuesday, April 18, 2023 4:04 PM
To: Lee, Eunice <LEESF@binnies.com>
Cc: Chung, Tommy <chungwl@binnies.com>; ivancpchan@cedd.gov.hk; Wilson KH MAN <wilsonkhman@td.gov.hk>
Subject: Re: CE92/2017 - Road Type of Proposed Access Road

Dear Eunice,

I have no comment on the proposed road type. Thanks.

Best regards,
Victor MA
E/YLW, TE/NTW
Transport Department
Tel: 2399 2422

From: "Lee, Eunice" <LEESF@binnies.com>
To: Victor YK MA <ykma@td.gov.hk>
Cc: Wilson KH MAN <wilsonkhman@td.gov.hk>, "ivancpchan@cedd.gov.hk" <ivancpchan@cedd.gov.hk>, "Chung, Tommy" <chungwl@binnies.com>
Date: 24/03/2023 12:00 PM
Subject: CE92/2017 - Road Type of Proposed Access Road

Dear Victor,

To facilitate the submission of Environmental Assessment Report, we would like to seek your confirmation on the road type of the proposed access road under the Study.

The proposed single-two lane access road (see attached **Figure 3.1**) between Shun Tat Street and Slip Road to/ from Tin Shui Wai West Interchange serves as a road within districts linking developments to the District Distributor Roads. Therefore, the proposed road type of the access road is recommended to be **Local Distributor**.

We shall be grateful if you could confirm the above road type **by 31 March 2023 (Friday)**. Thank you very much.

Eunice Lee
Technical Director



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