

**Legislative Council Public Works Subcommittee
meeting on 25 January 2017**

**778CL – Site formation and infrastructure works for
public housing developments at Chung Nga Road and Area 9, Tai Po**

Supplementary Information

PURPOSE

At the Legislative Council Public Works Subcommittee meeting on 25 January 2017 when the captioned project was considered (PWSC(2016-17)38 refers), Members requested the following supplementary information -

- (a) in respect of the air quality assessment conducted for the proposed public housing developments at Tai Po Area 9 and Chung Nga Road, whether the air pollutant levels (including fine suspended particulates (i.e. PM_{2.5}) and sulphur dioxide concentration) predicted in the assessment was higher than the latest Air Quality Objectives (AQOs) updated in 2014;
- (b) whether the Administration will request the Hong Kong Housing Authority (HA) or the relevant bureaux/departments to further assess the predicted air pollutant levels with reference to the latest AQOs and analyse the effect of such levels on the health of residents living in the proposed public housing developments in future; and
- (c) the current average levels of various air pollutants in Tai Po District and the predicted average levels of various air pollutants in Tai Po Area 9.

GOVERNMENT RESPONSES

2. The required information is set out below -
- (a) HA commissioned a consultant to carry out the air quality assessment for the proposed public housing developments at Tai Po Area 9 and Chung Nga Road in 2013 with a view to complying with the prevailing AQOs in 2013. The then AQOs did not prescribe the limit on fine suspended particulates (i.e. PM_{2.5}). The concentration of sulphur dioxide within the proposed developments was estimated at 667µg/m³ per hour, which complied with the limit of sulphur dioxide in the prevailing AQOs (i.e. 800µg/m³ per hour) in 2013. It was therefore concluded that the air quality within the proposed public housing developments was in compliance with the prevailing AQOs in 2013.
 - (b) The Environmental Protection Department (EPD) examined the Environmental Assessment Study (EAS) report in 2013 with reference to the prevailing AQOs. According to the relevant guidelines and codes of practice, a project proponent was not required to conduct an EAS again unless the project concerned had undergone substantial changes.

Notwithstanding the above, when using today's (i.e. 2017) standard to assess the air quality of the proposed developments, we obtained the following findings:

- (i) EPD monitored the air pollutant levels in Tai Po District in 2015. The concentration of fine suspended particulates (i.e. PM_{2.5}) recorded was 57µg/m³ per 24 hours, which was lower than the concentration limit as set out in the current AQOs (i.e. 75µg/m³ per 24 hours);
- (ii) as for sulphur dioxide, in the air quality assessment carried by HA in 2013, it was assumed that the sulphur content of the fuel used by emitters including Tai Po Hospital, Nethersole Hospital and Tai Po Industrial Estate was as high as 0.5%. Under this assumption, the sulphur dioxide level within the

proposed developments was estimated at $667\mu\text{g}/\text{m}^3$ per hour, which was still below the concentration limit as set out in the AQOs in 2013 (i.e. $800\mu\text{g}/\text{m}^3$ per hour). As a result of the Government's policy on continual improvement of air quality, the sulphur content allowed in the fuel used by emitters has been significantly lowered to 0.005% (i.e. 1% of the original level) as specified in the current Air Pollution Control (Fuel Restriction) Regulations. Therefore, it was estimated that the sulphur dioxide level within the proposed developments should meet the AQOs in 2013 and would be below the concentration limit as stated in the current standard. EPD monitored the air pollutant levels in Tai Po District in 2015 and confirmed that the sulphur dioxide level met the current AQOs.

In short, the air quality assessment conducted for the proposed housing developments in 2013 made a relatively conservative assessment on the prediction regarding various air pollutants. The current air quality in Tai Po District indeed meets the prevailing AQOs.

- (c) The Government endeavours to improve the air quality by regulating and monitoring pollutant emission through enforcement of the Air Pollution Control Ordinance and its subsidiary legislations. Inspections have also been arranged to check if the operations of pollutant-emitting facilities and plants in the district comply with the statutory requirements. Enforcement actions will be taken against any non-compliance.

The average levels of various air pollutants in Tai Po District in 2015 are set out at the Annex for reference.

Annex

The levels of various major air pollutants in Tai Po District in 2015 and the corresponding Air Quality Objectives (AQOs)

Pollutant	Averaging time	Level of air pollutants in Tai Po District in 2015 [iv] ($\mu\text{g}/\text{m}^3$)	HKAQOs concentration limit [i] ($\mu\text{g}/\text{m}^3$)	Number of exceedances allowed
Sulphur dioxide	10-minute	56	500	3
	24-hour	13	125	3
Respirable suspended particulates (PM ₁₀)[ii]	24-hour	77	100	9
	Annual	36	50	Not applicable
Fine suspended particulates (PM _{2.5}) [iii]	24-hour	57	75	9
	Annual	23	35	Not applicable
Nitrogen dioxide	1-hour	136	200	18
	Annual	37	40	Not applicable
Ozone	8-hour	157	160	9

Note:

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