

**Legislative Council Finance Committee  
meeting on 24 March 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 (LegCo) Finance Committee meeting on 24 March 2017 when the captioned project was considered (FCR(2016-17)83 refers), Members requested the following supplementary information –

- (a) (i) the findings of the measurement of the concentrations of air pollutants, including PM 2.5 and sulphur dioxide (SO<sub>2</sub>), carried out by the Environmental Protection Department (EPD) at Tai Po Air Quality Monitoring Station in 2015;
- (ii) whether EPD agreed with the concentrations of PM 2.5 and SO<sub>2</sub> projected for the proposed project as stated in the supplementary information (LC Paper No. PWSC80/16-17(01)) provided by the Transport and Housing Bureau;
- (iii) the concentrations of air pollutants, including PM 2.5 and SO<sub>2</sub>, measured by EPD at the surrounding of the proposed developments during the above monitoring activities, if any;

- (iv) whether the consultancy report of the air quality assessment for the proposed projects in 2013 had mentioned the licence of chimney used in assessing the concentration of SO<sub>2</sub>. If yes, which part of the report mentioned the information and what are the details;
- (b) the responses to questions listed in Hon CHU Hoi-dick's letter submitted at the meeting; and
- (c) whether the Administration will conduct a regional traffic review for Tai Po District. If yes, please explain the present situation; if not, please give the reasons.

## **GOVERNMENT RESPONSES**

2. The required information, consolidated from the relevant government departments, is set out below –

- (a) (i) According to the Air Quality in Hong Kong 2015 ([http://www.aqhi.gov.hk/api\\_history/english/report/files/AQR2015e\\_final.pdf](http://www.aqhi.gov.hk/api_history/english/report/files/AQR2015e_final.pdf)) issued by EPD, the air quality, including PM<sub>2.5</sub> and SO<sub>2</sub>, measured at Tai Po Air Quality Monitoring Station in 2015 complied with all the concentration limits in the Air Quality Objectives (AQOs) of Hong Kong. The data adequately represents the air quality conditions at the public housing developments at Tai Po Area 9 site and Chung Nga Road site.
- (ii) We have consolidated the information from the relevant government departments when preparing the supplementary information on the proposed project for submission to LegCo. EPD agreed with the concentrations of PM<sub>2.5</sub> and SO<sub>2</sub> projected for the proposed project as stated in LC Paper No. PWSC80/16-17(01).

- (iii) EPD does not have other air quality monitoring stations near the proposed development sites except the Tai Po Air Quality Monitoring Station.
  
- (iv) Two air quality assessment reports in 2013 were attached in LC Paper No. PWSC47/16-17(01). For example, in paragraph 8.4.7 of the report for the proposed development at Chung Nga Road, it mentioned that the chimney information was originated from the register specified in the Air Pollution Control Ordinance. Annex 8.4 of the report also listed the chimney emission data based on the licence information available at that time, which was not disclosed as it involved third party information. At the time of the assessment, the licence information available was still based on the fuel standard of 0.5% sulphur-content. The emission data might have been revised later on upon licence renewal. After EPD's review, all the current licences are based on the fuel standard of 0.005% sulphur-content. The SO<sub>2</sub> emission rate under the current chimney licences is lowered by 100 times when compared with the rate used at the time of assessment.

(b) (i) Air Quality Objectives

According to the relevant guidelines and codes of practice, EPD examined the environmental assessment study (EAS) report with reference to the prevailing (2013) AQOs. Unless there is a substantial change in the project, the project proponent does not need to conduct an EAS again.

In addition, the Government has provided information to LegCo on its efforts in improving air quality in recent years and the latest data on air quality on many occasions. The air quality in the proposed developments at Tai Po Area 9 and Chung Nga Road

has been significantly improved.

(ii) Emissions at Tai Po Hospital and Nethersole Hospital

- (1) The report in 2009 only pointed out the possibility of waste combustion in hospitals without drawing a conclusion. After the implementation of the Clinical Waste Control Scheme in August 2011, all clinical waste in hospitals would be treated collectively at the Chemical Waste Treatment Centre in Tsing Yi.
- (2) In 2009, preliminary review on the proposed public housing development at Tai Po Area 9 was a “qualitative assessment” without using computer modelling or detailed assessment. The review report pointed out that the proposed public housing development at Tai Po Area 9 was located within the buffer zone of chimneys at Tai Po Hospital. Therefore, the chimney emissions at Tai Po Hospital might have an air quality impact on the area and so might restrict the proposed housing development. In view of the above, the Hong Kong Housing Authority (HA) subsequently conducted various technical assessments for the proposed public housing development in 2013, including a more detailed “quantitative assessment” (through computer modelling) on air quality. The assessment results indicated that there would be no adverse impact on the proposed public housing development due to the chimney emissions at Tai Po Hospital.

At the District Council meeting on 11 March 2009, the EPD representative mentioned that the air pollutant emissions from the chimneys at Tai Po Hospital were mainly

generated by boilers. The “quantitative assessment” in 2013 showed that the boilers at Tai Po Hospital and Nethersole Hospital were the sources of chimney emissions. The boilers were combusted by gaseous fuel, which generally had less air pollutant emissions than oil-fired boilers. A detailed computer modelling on the chimney exhaust gas at the hospitals predicted that the levels of SO<sub>2</sub>, nitrogen dioxide and respirable suspended particulates at different heights and locations of the proposed development would meet the relevant AQOs.

(iii) Redacted Information

Parts of the reports were redacted as they mainly contained information relating to Tai Po Hospital and other chimney licences and were not disclosed on grounds of third party information or privacy.

(iv) Market

When planning new housing estates, HA will consider a number of factors when determining the provision of suitable retail facilities for the estates concerned in order to address the basic daily needs of residents. They include the scale of the proposed housing estates and the availability of shopping arcades and retail facilities nearby. Some circumstances specific to individual developments are also required attention. For example, whether the inclusion of non-domestic facilities will lead to reduction of flat production, extension of construction period and substantial financial commitment. Also, considerations will be given to the operational and financial viability and suitability of the concerned facilities so that they could be effectively operated and provide sustainable

services to the residents.

HA will make adjustments to the original proposal for Tai Po Area 9 taking into account the relevant factors and the opinions of various parties. Instead of a superstore with wet trade and a frozen food store as previously proposed, the size of the superstore will be reduced and the frozen food store will be cancelled for the provision of fresh food retail outlets in the form of street shops with an area approximately equivalent to 30 to 40 traditional wet market stalls. This would balance between the financial viability of shopping facilities and diversification of retail mix for the residents, and at the same time, ensure better utilisation of public resources. Together with other types of shopping facilities at Tai Po Area 9, the revised proposal will meet the basic needs of future residents at Tai Po Area 9.

Markets are part of estate commercial facilities under HA and they have no separate operating account.

(v) Residential Care Services for the Elderly

- (1) There is one subvented residential care home for the elderly (RCHE) each at Fu Heng Estate, Fu Shin Estate and Tai Yuen Estate which are near Tai Po Area 9, with a total provision of 245 residential care places. Also, there is a private RCHE at nearby Tai Po Old Market which participates in the Enhanced Bought Place Scheme and provides 79 subsidised places. All applications for subsidised residential care services for the elderly are put on the Central Waiting List for service allocation on a territory-wide basis. There is no separate waiting list for individual districts. As at 30 April 2017, a total of 36 045 applicants were

being waitlisted for subsidised residential care service for the elderly on the Central Waiting List.

- (2) The RCHE planned in the proposed public housing developments at Tai Po Area 9 and Chung Nga Road East will be located at the welfare block of Chung Nga Road East development.

The Government has been adopting a multi-pronged approach to increase the provision of residential care places for the elderly. In the short run, the Government has introduced the Pilot Scheme on Residential Care Service Voucher for the Elderly and will provide more places at private RCHE through the Enhanced Bought Place Scheme. In the medium term, the Government will build new contract RCHEs to increase the provision of subsidised places. In the long run, the Government will identify suitable sites for provision of new RCHEs, including exploring the incorporation of residential care facilities for the elderly into new development and redevelopment projects and converting of vacant buildings into RCHEs.

(vi) Pedestrian Connectivity

HA will construct lifts and covered walkways to connect the proposed public housing developments at Tai Po Area 9 site and Chung Nga Road East site for pedestrian connectivity, providing convenient access to the people in the district. Residents of nearby estates such as Fu Heng Estate can also make use of the facilities to gain convenient access to and from Tai Po Area 9.

(vii) Tai Po Traffic

The traffic impact assessment report of Kwong Fuk Bridge pointed out that the junction of Nam Wan Road / Kwong Fuk Road has reached its full capacity. It was recommended that changing the traffic signal control could be considered to improve traffic flow at the junction. Since the publication of the above report, the Transport Department (TD) has been monitoring the traffic at the junction to decide how to implement the improvement measures recommended in the report. However, starting from 2011, the traffic flow on one of the roads connecting to that junction has been decreasing year by year. It was not until 2014 that TD changed the green time of the traffic lights at the junction on account of the increased traffic flow on the other junctions in order to cope with the increasing traffic. With further adjustment to the traffic signal control in 2016, a reserved capacity of 5% is maintained at the junction.

According to the latest forecast, the junction will reach its full capacity in 2026. To address the situation, the Government has the following measures-

- (1) during the construction of the sports centre, community hall and football pitches in Area 1, Tai Po, the relevant works department will construct an additional traffic lane connecting the existing Tung Cheong Street and Nam Wan Road to alleviate the traffic flow at the junction of Nam Wan Road / Kwong Fuk Road. That project is expected to be completed by end 2020;



- (2) TD is also working on schemes to improve the junction of Nam Wan Road / Kwong Fuk Road and has planned to add a traffic lane to the northbound carriageway of Nam Wan Road. If technically feasible, TD will consult the District Council this year. It is expected that with the completion of the above two works items, the traffic at the junction of Nam Wan Road / Kwong Fuk Road will be generally smooth in the foreseeable future; and
- (3) In the long run, the proposed Kwong Fuk Road Bridge project can further improve the traffic condition at the junction of Nam Wan Road / Kwong Fuk Road.

The traffic flow mentioned in LC Paper No. PWSC46/16-17(02) has already taken into account the additional traffic flow on the southbound of Nam Wan Road arising from the proposed public housing development at Tai Po Area 9. In addition, the traffic impact assessment of Kwong Fuk Bridge has made reference to the traffic conditions in the district and has suitably incorporated the expected traffic growth in the future, so it should sufficiently cover the various impacts arising from the proposed development in Tai Po Area 9. Therefore, the conclusions and recommendations in the traffic impact assessment of Kwong Fuk Bridge are still valid.

(viii) Traffic Impact Assessment

- (1) The consultant has made reference to the Annual Traffic Census (ATC) published by TD before deciding the traffic survey periods. According to the ATC, the evening peak hour of the related road section was between 5 pm and 7 pm.

- (2) The development parameters adopted in the traffic impact assessment were based on the information provided by HA in October 2015. Considering that the final set of development parameters may be subject to minor adjustments, the consultant put an additional 10% allowance to the number of flats and population of the proposed public housing developments at Tai Po Area 9 and Chung Nga Road when conducting the traffic impact assessment.

When estimating the impact arising from the population changes in the area under the context of traffic impact assessment, the consultant has made reference to the relevant planning data provided by the Planning Department and the impact has been reflected in the traffic forecast.

- (3) The traffic impact assessment report forecasted the demand for public transport services for the three proposed public housing developments at Tai Po Area 9 and Chung Nga Road during peak hours and recommended the required service capacity and peak average headway of the proposed public transport services. The figure of “4 320 people/hour” as stated in Section 5.2.3 of the report refers to the estimated hourly handling capacity of the proposed public transport services during morning peak hours.
- (4) The traffic impact assessment report assessed the demand for public transport services for the public housing development at Area 9, Tai Po upon population intake. In planning the public transport facilities at Area 9, Tai Po, TD has mainly made reference to the relevant assessment, as well as the overall planning consideration of the estates and the land

requirement of various facilities. After considering various factors, TD concluded that the provision of the planned public transport facilities was suitable.

TD has not finalised the plan for the provision of bus services at Area 9, Tai Po yet. In general, TD and the bus companies will start planning the public transport services in about one to two years before the completion of a new housing development, so as to provide adequate public transport services to meet the demand upon population intake. TD will consult the stakeholders in the local community (such as the District Council) when the plan is available.

(ix) Greening Area

- (1) Most of the existing trees within the site boundary of Tai Po Area 9 are of exotic tree species. They are not part of the primary woodland, but woodland plantation installed for slope stabilisation and greening in early years. Moreover, nearly 20% of them are invasive exotic tree species such as *Leucaena leucocephala*, which are detrimental to the surrounding habitat. Compensatory planting of native tree species after removal of these tree species can bring in vegetation of higher ecological value to the surrounding area.

We have accorded a high priority to tree preservation in site planning and design. After due consideration of tree health conditions, locations, survival rates after transplanting, development layout and space requirements during construction, felling of 1 925 trees will be required under this project.

- (2) In the past five years from 2012 to 2016, two Section 12A applications for rezoning “Green Belt” zone were partially agreed by the Town Planning Board and 16 were rejected.

(x) Feeder Bus Service

Similar to the practice in other new development areas, TD will, subject to the population intake arrangement and timetable, plan the public transport services for the new development areas of Tai Po (e.g., Area 9, Tai Po) in a timely manner to meet the additional passenger demand including enhancing and extending existing public transport services or introducing new routes, etc. In formulating the arrangement, TD will consider a number of factors such as traffic impact assessment reports, recommendations of the public transport operators, operating conditions of existing public transport services, traffic conditions of nearby roads, views from the locals, etc. TD will consult the Transport and Transport Committees of the relevant District Councils on the public transport services proposals. The finalised arrangements will be implemented in a timely manner in accordance with the timetable of population intake of the new development areas.

The Kowloon Motor Bus Company (1933) Limited (KMB) route no. 71A (Fu Heng – Tai Po Market Station) and 71K (Tai Wo – Tai Po Market Station) (via Fu Heng) have been providing feeder bus services to and from Tai Po Market MTR Station for the residents of Fu Heng Estate. TD will keep monitoring the operation of these bus routes and will suitably adjust the services to cater for the passenger demand whenever necessary. TD does not consider it justified

to provide a new MTR feeder bus service for Fu Heng Estate at this stage. Nevertheless, TD will continue encouraging public transport operators, including MTR Corporation Limited, to introduce fare concessions as far as possible including interchange discount for passengers subject to prudent commercial principles.

- (c) The Civil Engineering and Development Department employed a consultant to carry out an assessment on the traffic impact in the vicinity (near Chung Nga Road and Chuen On Road) arising from the proposed public housing developments at Tai Po Area 9 and Chung Nga Road. The traffic assessment indicated that the maximum volume to capacity ratio of Chung Nga Road and Chuen On Road would only be 0.58 during peak hours after the population intake of the proposed public housing developments at Tai Po Area 9 and Chung Nga Road.

According to the traffic impact assessment report on roads in the vicinity of the proposed public housing developments at Tai Po Area 9 and Chung Nga Road, the hourly traffic flow after population intake during morning peak hours from the junction of Chung Nga Road / Ting Kok Road / Nam Wan Road to Nam Wan Road, leading to Tai Po town centre is approximately 1 000 vehicles. This is less than half of the design capacity of the road section of Nam Wan Road between Ting Kok Road and On Po Road. Since the traffic will be further distributed to different roads after entering Nam Wan Road, the traffic impact on the Tai Po town centre is considered to be minimal.