LEGISLATIVE COUNCIL
PANEL ON DEVELOPMENT

PWP Item No. 3185GK — Re-provisioning of Transport Department's Vehicle Examination Centres at Tsing Yi

Follow-up Actions Arising from the Discussion at the Meeting on 16 December 2016

Supplementary information requested by the Panel on Development on 16 December 2016 is provided below:

(a) given that Tsing Tsuen Bridge would be one of the main routes used by vehicles travelling to/from the proposed new Vehicle Examination Centre ("VEC") at Tsing Yi and these vehicles would have to change to a dedicated left-turn lane to Tsing Yi Road West when arriving at Tam Kon Shan Interchange from Tsing Tsuen Bridge, whether the commissioning of the new VEC would cause traffic congestion around the said dedicated left-turn lane; if yes, the measures to address this problem; if no, the reason;

2. The Supplementary Traffic Study for the new VEC carried out between September and November 2016 covered all key roundabouts and junctions on Tsing Yi, and both inbound and outbound traffic flows were considered. The assessment results show that the traffic impact induced by the new VEC on the road network would be insignificant. Specifically, for the Tam Kon Shan Interchange, it would operate well within capacity during the peak hours in the design years assessed. For inbound traffic, no significant vehicle queuing before entering the interchange is anticipated, and the dedicated left-turn lane can be utilised by the inbound traffic to bypass the interchange without causing any obstruction. The assessment on the outbound traffic via the interchange shows that the performance of the interchange is also satisfactory. Detailed assessment figures for this interchange (RA5) are shown in **Appendix 1**.

(b) regarding the road widening works along the eastern side of Sai Tso Wan Road to allow two lanes towards the new VEC site (for incoming vehicles) and one lane away (for vehicles leaving VEC) as a traffic mitigation measure to accomodate the additional traffic generated by the new VEC, whether (i) the road widening works could cope with the vehicular traffic leaving VEC; and (ii) those who worked in the areas nearby (e.g. workers of the dockyards), being the main users of Sai Tso Wan Road, had been consulted on the proposed traffic mitigation measures;

3. The project includes road widening works of approximately 485m in length along the eastern side of Sai Tso Wan Road to allow two lanes towards the new VEC and one lane away. As some vehicles may arrive earlier than their appointments and on certain occasions may queue up to wait for vehicle examination, the additional traffic lane towards the VEC will provide an exclusive right turn lane for vehicles going into the VEC without blocking other westbound traffic.

4. For vehicles leaving the VEC, since vehicle examination is a step-by-step process along the inspection lanes, the departure of vehicles will be in regular sequence and evenly distributed. A traffic signal control system will be installed near the ingress/egress of the VEC on Sai Tso Wan Road and the egress point of the VEC is proposed to be further widened to regulate the eastbound traffic. This can ensure that the traffic coming out from the VEC will not be blocked by vehicles from the western end of Sai Tso Wan Road and Tsing Tim Street, and can always leave smoothly. With the proposed improvements implemented, it is anticipated that Sai Tso Wan Road would operate well within capacity. Detailed assessment figures are set out in the table below.

Link Performance of Sai Tso Wan Road with Improvement Scheme

Road Links		Direction	Assessment Year	Road Type	No. of Lanes	V/C Ratio	
						AM Peak	PM Peak
L1	Sai Tso Wan Road	WB-Straight ahead	2019	LD	1	0.53	0.43
		WB-Right Turn			1	0.20	0.20
		EB			1	0.63	0.65
		WB-Straight ahead	2024		1	0.54	0.44
		WB-Right Turn			1	0.20	0.20
		EB			1	0.63	0.66

Notes: WB – West Bound; EB – East Bound; LD – Local Distributor
The Volume/Capacity (V/C) Ratio reflects the performance of a road. A V/C Ratio equals to or less than 1.0 means that the road has sufficient capacity to cope with the volume of vehicular traffic under consideration and the resultant traffic will flow smoothly. A V/C Ratio between 1.0 and 1.2 indicates the onset of congestion, and that above 1.2 indicates more serious congestion.

5. We will closely monitor the traffic condition along Sai Tso Wan Road to ensure smooth traffic flow after the commissioning of the new VEC. The Transport Department will also closely liaise with relevant stakeholders including the related trades and associations to review any necessary improvements from the operational point of view. We had also consulted the nearby Yiu Lian Dockyard Limited and Hong Kong United Dockyards Limited at Sai Tso Wan on the proposed new VEC, and no adverse comment was received.

(c) the measures to be undertaken by the Administration in case there was a serious traffic congestion around the new VEC;

6. The Transport Department (TD) has a 24-hour Emergency Transport Co-ordination Centre (ETCC), which is responsible for monitoring the traffic and public transport situation. In case there is serious traffic congestion around the new VEC, the ETCC will disseminate traffic and public transport news to the public, and coordinate with public transport and tunnel operators, the Police and other relevant government departments to alleviate the impact on traffic and public transport services. In addition, if there is any serious traffic incident on Sai Tso Wan Road causing closure of the road to the new VEC, TD will reschedule the inspection appointments for the affected vehicles within 5 working days.

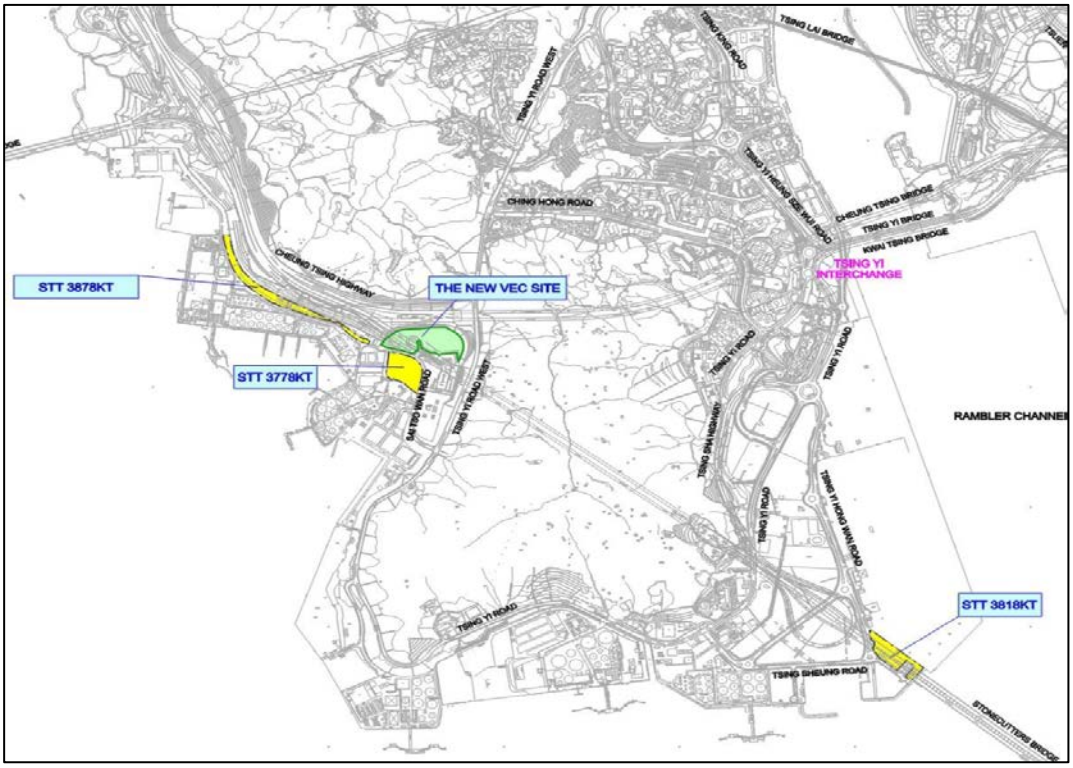
(d) if the maximum handling capacity of the new VEC, i.e. 1 000 vehicles per day, could not cope with the demand for vehicle examination services, what action the Administration would take to meet the increased demand;

7. The three existing VECs are handling around 800 inspections per day. According to the records of the past ten years, the number of inspections and the distribution of vehicle types inspected remained steady over the years, and the waiting time for an appointment is kept within 10 working days. It is expected that there would not be any significant change to the demand for vehicle examination services in the next decade or so. The daily handling capacity of the new VEC can be increased to 1 000 inspections per day, which means there can be 25% increase in handling capacity to cater for any future increase in demand. TD would consider the feasibility to further increase the number of inspections beyond 1 000, should such need arise in the longer term.

(e) whether sufficient alternative parking spaces would be provided to the vehicles currently using temporary parking spaces at the project site and would be affected by the relocation proposal; and

8. The project site is currently occupied by a temporary vehicle park under a Short Term Tenancy (STT). A parking utilisation survey of the temporary vehicle parks on Tsing Yi was conducted in September and October 2016 during daytime (10:00-18:00) and nighttime (22:00-02:00). In general, about 250 vehicles parked on the project site during weekend nighttime which was identified as the peak period. Two existing STT sites, namely STT 3778KT opposite to the new VEC site and STT 3818KT located in Tsing Yi South, were found to have about 160 vacant spaces which could help accommodate the demand. A proposed STT site (STT 3878KT) on Sai Tso Wan Road adjoining the project site will soon be tendered for temporary vehicle parking purpose to provide about another 160 parking spaces. Therefore, the vehicle parking spaces available would sufficiently cater for the affected temporary parking spaces. Moreover, we are considering the feasibility to use the temporary queuing area for public vehicle parking purpose during nighttime when the new VEC is not in operation, which

could provide 40 parking spaces in addition. The locations of the above sites are shown in the figure below.



Location Plan of Temporary Vehicle Parks for Reprovisioning of Parking Spaces

(f) whether the Administration had conducted any feasibility study on the proposal of providing parking spaces at the project site, such as by way of co-locating vehicle examination services and car parking spaces in a multi-storey building, and providing a separate vehicular ingress/egress for the car park users; if yes, the details; if no, why such a study had not been/would not be conducted.

9. We have examined the feasibility of incorporating public vehicle parking spaces at the project site. Due to site constraints and operational considerations, it is considered infeasible to co-locate vehicle examination services and public vehicle parking spaces in a multi-storey building, which are set out in detail below.

10. The new VEC proposal has been designed under various site constraints including irregular site configuration, limited headroom underneath Tsing Sha Highway, required 2-metre wide clearance zone around flyover structures, and areas reserved for underground utilities, etc. The developable areas on ground level are almost fully occupied by the proposed VEC building footprint, and the vehicular lanes for queuing and site ingress/egress and various vehicle examination facilities have just marginally sufficient area after compliance with the green coverage requirements.

11. In order to manage and control the traffic flow inside the multi-storey VEC building, vehicles have to queue up at designated waiting lanes according to their

assigned floors after entering the VEC, and will go to the inspection floors in batches. Sharing of these vehicular lanes designated for the VEC vehicles with those for public parking will mix up the vehicle queues, affect timely arrival of the vehicles for examination at the inspection lanes, which will in turn reduce the daily inspection capacity and disrupt the inspection operation of the VEC.

12. Moreover, in order not to adversely affect the normal operation and efficiency of the VEC, there should be separate site ingress/egress, dedicated vehicular lanes (including ramps), pedestrian access point, etc. for the public vehicle park. Having reviewed the site layout, no spare space on ground level can be identified to accommodate the above dedicated access requirements for the public vehicle park. The Tsing Sha Control Area (TSCA) adjoining the site also limits the creation of additional site ingress/egress along the common boundary. Above all, the bottleneck area near the middle of the site, which is occupied by the essential vehicular lanes, constitutes the major constraint.

13. In view of the lack of space on ground level, the feasibility of constructing a basement public vehicle park has also been explored. However, there are a large number of Drainage Reserve Areas running across the site which render it extremely difficult to incorporate a basement public vehicle park of a meaningful scale. It would also involve a large volume of rock excavation which implies a significant cost increase and a much longer construction period. Furthermore, deep excavation for basement construction may have implications on the stability of the slopes to the north of the site. The site constraints are shown in the diagram at **Appendix 2**.

Development Bureau
January 2017

Appendix 1

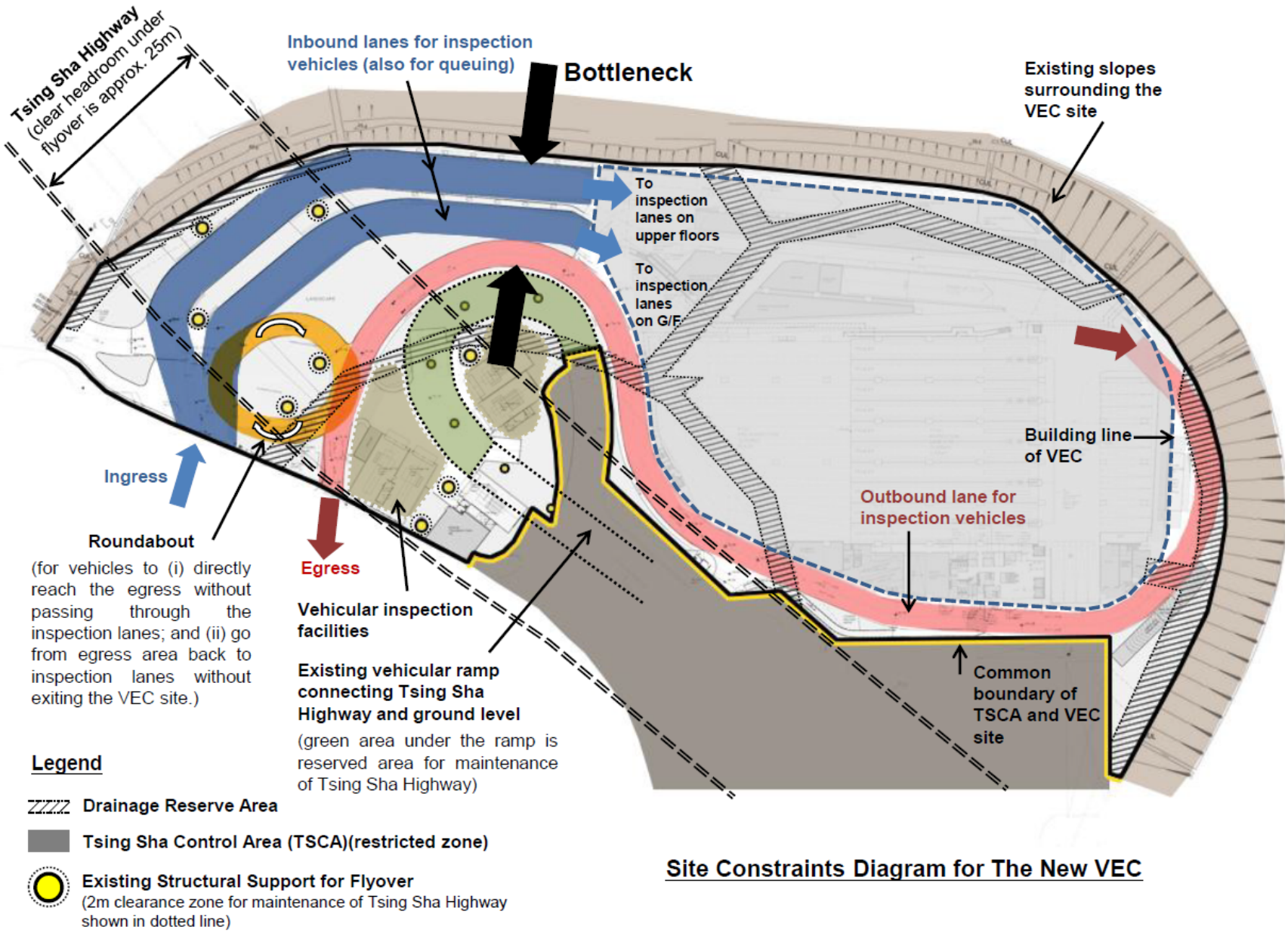
Performance of Road Junctions and Roundabouts in Design Years 2019 and 2024 with Improvement Scheme

Index	Junction	Type	2019 R.C. / D.F.C		2024 R.C. / D.F.C	
			AM	PM	AM	PM
J1	Cheung Tsing Highway / Tsing Yi Road West	Signalized	20%	37%	15%	32%
J2	Tsing Hung Road / Tsing Yi Road	Signalized	31%	33%	21%	32%
J3	Tsing Sheung Road / Tsing Yi Road	Priority	0.76	0.71	0.79	0.72
J4	Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West	Signalized	19%	28%	16%	24%
J5	Car Park Entrance / Sai Tso Wan Road	Signalized	>50%	>50%	>50%	>50%
J6	Tsing Tim Street / Sai Tso Wan Road	Priority	0.24	0.13	0.24	0.13
J7	Tsing Yi Road West / Tsing Chin Street*	Priority	N/A	N/A	N/A	N/A
J8	Tsing Yi Road West / Tsing Hong Road	Signalized	35%	>50%	25%	>50%
J9	Tsing Yi Road West / Liu To Road	Signalized	>50%	42%	>50%	39%
J10	Tsing Yi Road West / Fung Shue Wo Road	Signalized	>50%	>50%	>50%	>50%
RA1	Tsing Yi Interchange	Roundabout	0.66	0.74	0.74	0.82
RA2	Tsing Yi Road West / Tsing Yi Hong Wan Road / Tsing Sha Highway	Roundabout	0.82	0.66	0.84	0.68
RA3	Hong Wan Road	Roundabout	0.54	0.43	0.55	0.44
RA4	Hong Wan Road / Tsing Ko Road	Roundabout	0.33	0.26	0.34	0.27
RA5	**Tam Kon Shan Interchange**	**Roundabout**	**0.69**	**0.68**	**0.84**	**0.81**
RA6	Tsing Yi Heung Sze Wui Road / Fung Shue Wo Road / Tsing King Road	Roundabout	0.52	0.48	0.53	0.49
RA7	Tsing Sheung Road / Tsing Yi Hong Wan Road	Roundabout	0.07	0.07	0.07	0.07
RA8	Tsing Hong Road / Tsing Yi Road	Roundabout	0.42	0.36	0.48	0.40
RA9	Tam Kon Shan Road / Tsing Yi North Costal Road	Roundabout	0.12	0.12	0.12	0.12
RA10	Tsing Ko Road / Tsing Sheung Road	Roundabout	0.13	0.08	0.13	0.08

Notes: Figures shown represent "Reserve Capacity" (RC) for the signal controlled junctions and "Design Flow to Capacity" (DFC) ratio for the priority junctions and roundabouts. An existing signal-controlled junction with a reserve capacity (RC) >15% implies that it is operating satisfactorily while a negative RC% suggests that it is overloaded. For priority junctions and roundabouts, the performance indicator is the DFC (Design Flow to Capacity). For existing junctions, DFC < 0.85 is the acceptance criteria; DFC over 1.00 indicates overloaded conditions.

* Only ingress traffic is allowed on Tsing Chin Street. No traffic conflicts or delay is expected in this location. Therefore, no junction assessment is required.

Appendix 2



Site Constraints Diagram for The New VEC