

EXECUTIVE SUMMARY

Direct Investigation Transport Department Actions for Safe Operation of Public Light Buses

Background

Road safety is paramount. The Transport Department (“TD”) has the undeniable responsibility for proactively enhancing the safety standard of our public transport services.

2. Public Light Buses (“PLBs”) are one of the most popular modes of public transport in Hong Kong. The number of PLBs has been frozen at 4,350 since 1976. Statistics show that the incidence of accidents involving PLBs is significantly higher than that of other classes of motor vehicles (**Annexes I and II** of the report).

3. In 2000, after several fatal accidents involving PLBs, TD undertook to examine and develop safety enhancement measures for PLBs. However, little progress was made in the following nine years, reflecting neither due diligence nor sense of urgency on the part on TD. Study and implementation of the installation of speed limiter and vehicle monitoring system (commonly know as “blackbox”) on PLBs were only accelerated after two major fatal accidents involving PLBs in June and July 2009. The Ombudsman, therefore, initiated this direct investigation in January 2010.

Enhanced Safety Measures Already Introduced

4. Major safety enhancement measures for PLBs introduced by TD before January 2010 include:

- enhanced monitoring and training of PLB drivers;
- mandatory installation of Speed Display Device on all PLBs; and
- mandatory installation of passenger seat belts and high back seats on all PLBs registered on or after 1 August 2004.

Passenger Seat Belts and High Back Seats

5. As at 30 September 2010, 2,415 out of 4,350 PLBs (i.e. 55.5%) are equipped with passenger seat belts and high back seats, in contrast to TD's prediction in mid-2006 that over 60% of all PLBs would be equipped with such equipment by mid-2008. Responding to this investigation, TD states that it is now unable to give an estimate on when all PLBs will be fitted with the equipment. Details of the PLBs with such retro-fitment are indicated below.

<i>Registration Year</i>	<i>Number of PLBs</i>	<i>PLBs with Passenger Seat Belts and High Back Seats</i>
On or after 1 August 2004	2,074	2,074 (100%)
Before 1 August 2004	2,276	341 (15%)
Total	4,350	2,415 (55.5%)

Age distribution of the 2,276 PLBs registered before 1 August 2004 and still running on road as at 30 September 2010 is shown in **Table 3** of the report.

6. As at 30 September 2010, 50% of the 2,093 PLBs having been scrapped by owners since August 2004 were aged from 11 to 14 years, and 86% of all the PLBs replaced were aged below 15 years. Yet, the oldest one replaced was aged 20. **Table 4** of the report indicates the age distribution of these 2,093 PLBs.

Speed Limiter

7. TD intends to submit legislative amendments in 2010/11 to make it a statutory requirement to install speed limiter on all PLBs. The related events are summarised below.

<i>Date</i>	<i>Event</i>
October 2003	TD enquired of the major Japanese manufacturers of PLBs operating in Hong Kong about the application of speed limiter regulations in Japan.
17 November 2005*	TD asked the two major manufacturers specifically about: (a) the lead time required for provision of speed limiter on their PLBs; and (b) the possibility of retrofitting a speed limiter on current models. On (a), one manufacturer indicated that a lead time of two to five years would be required for different types of PLBs. On (b), both manufacturers claimed that it was not possible.
19 December 2005 & 23 June 2006	Based on the above responses, TD explained to the Legislative Council Panel on Transport ("LegCo Panel") the difficulties of stipulating the installation of speed limiters on PLBs.

November 2006 & May 2008	TD enquired of the PLB manufacturers on the latest development of the issue. The manufacturers gave similar responses as above in January 2007 and June 2008 respectively.
17 June 2009 [#]	TD communicated with the two major manufacturers on the issue again. While pointing out, for the first time, on 18 and 23 June 2009 the availability of certain standalone speed limiters in local market, the manufacturers maintained that it would need a few years to provide built-in speed limiter.
26 June 2009	At the LegCo Panel meeting, the Administration maintained that there were difficulties to stipulate the installation of such device on PLBs.
27 July 2009 [@]	TD announced its intention of introducing compulsory installation of speed limiter on PLBs.
30 July 2009	The two major manufacturers confirmed with TD that they had no objection to fit external devices on their PLBs.
24 August 2009	TD released the specification of speed limiter for reference by all potential device suppliers.
By November 2009	TD approved 6 models from 3 local suppliers.
5 March 2010	TD notified all PLB owners and licence holders of addition of a new licence condition that, with effect from 7 June 2010, a PLB would be required to be installed, within three months from the date of issue or renewal of licence, with a speed limiter. Given that the validity of a vehicle licence is one year, all PLBs are expected to be installed with speed limiters by September 2011.

* 4 days after an accident in Sheung Shui involving a PLB, resulted in 2 deaths and 5 injuries

5 days after an accident in Mongkok involving a PLB, resulted in 2 deaths and 8 injuries

@ 2 days after an accident in Yuen Long involving a PLB, resulted in 4 deaths and 17 injuries

8. Prior to July 2009, TD had not commissioned, or been involved in, any trial on speed limiters. Some device suppliers revealed to this Office that various models of speed limiter and blackbox had been introduced to Hong Kong for at least five years. Over the years, at least one supplier and one PLB operator had tried out a speed limiter in 2006 and 2007, and had verbally informed TD frontline staff of such trials. However, TD indicated to us that it only knew of such trial through media reports in early August 2009.

Blackbox

9. TD informed the LegCo Panel as early as December 2003 that it would conduct trials on the use of blackboxes on PLBs. However, instead of commissioning trials by itself, TD facilitated blackbox suppliers to run three trials from 2004 to mid-2009. All were found unsuccessful. In February 2007, in response to TD's enquiry, the Hong Kong Productivity Council ("HKPC") made

a face-to-face presentation to TD on HKPC's proposed in-vehicle monitoring system tailor-made for PLBs. HKPC informed TD in writing in March 2007 that system development and trial on road, each needed about six months, would cost around \$2 million. TD did not follow up the matter. It explained that it had received no formal proposal from HKPC since then.

10. In August 2009, having regard to technological maturity in blackbox design and manufacturing and experiences in Europe and Mainland China, TD proposed to mandate the installation of blackbox on new PLBs. It intends to submit the necessary legislative amendments in 2010/11.

Mandatory Pre-Service Training for PLB Drivers

11. TD first informed the LegCo Panel in June 2006 that the PLB trade was generally supportive of the proposal of requiring applicants for a PLB driving licence to attend pre-service training courses that focus on driving behaviour and attitude. Having discussed with the Police and the Department of Justice since July 2008, TD now plans to introduce the necessary legislative amendments in 2010/11.

12. As regards the reasons for taking over four years for the preparatory work, TD explains that it needs to develop a detailed legislative proposal, to formulate content and assessment criteria for the training programme, to stipulate qualifications for course providers and trainers, to put in place arrangements for ensuring authenticity of attendance records and certificates issued, and to enhance the related computer system.

Observations and Opinions

Lacking Due Diligence and Sense of Urgency

13. Evidence indicates that at least for the measures listed below, there had been a lack of due diligence and sense of urgency in TD to explore their feasibility until mid-2009, when two fatal accidents involving PLBs happened on 12 June and 25 July 2009.

14. **Speed Limiter.** TD's enquiries with the major Japanese manufacturers of PLBs regarding the installation of speed limiters only started in November 2005, four days after a fatal PLB-related accident had happened. Thereafter, TD's follow-up enquiries with the manufacturers in November 2006 and May 2008 were no more than routine requests for update. Again, it was not until another fatal PLB-related accident had happened did TD follow up the issue with the

manufacturers again in June 2009. TD has been taking prompt follow-up actions since then. Nevertheless, the issue had been put on the back burner for some four years.

15. **Blackbox.** TD did not directly commission trial on the use of blackbox on PLBs, but only facilitated three trials volunteered by suppliers. Owing to its passive role, TD had no control over the timing and direction of the trials.

16. TD did ask HKPC for advice in early 2007. However, subsequent to HKPC's elaboration on its proposed trial, TD did not pursue the matter further, leaving the task simply untouched. TD's explanation for not following up the matter (**para. 9**) is hardly convincing.

17. **Training of PLB Drivers.** The government-subsidised PLB driver training courses have been introduced for more than six years. However, up to end of 2009, only 1,138 drivers had attended such courses, representing only about 10% of the 11,000 to 12,000 active PLB drivers. The promotion efforts of TD, particularly those targeting PLB drivers directly, have been minimal.

18. TD's explanation for taking more than four years to prepare the mandatory pre-service training for PLB drivers (**para. 12**) is again unacceptable. Most of the details of the scheme have been readily available, given that the training content, assessment criteria, trainer qualifications and other administrative arrangements are to be modeled on existing similar programmes mentioned above.

Want of Timely Review

19. As at 30 September 2010, there were still 1,935 PLBs registered before 1 August 2004 running on the road without passenger seat belts. If we rely solely on attrition of the "pre-August 2004" PLBs to be replaced, it may well take at least eight years for all PLBs to be equipped with such equipment. By any estimation, five years later, by the end of 2015, it is very likely that there will still be about 1,000 PLBs running on the road without such safety equipment. This is only a rough estimation based on the statistics of PLBs replaced in the past six years (**Table 4** of the report) versus the age distribution of the existing PLBs (**Table 3** in report). Thus, passengers will continue to face a higher risk posed by these PLBs for at least another eight years. This is unacceptable. With the mandatory scheme introduced for six years now, we consider it important for TD to review the issue and resolve the problem without delay. The feasibility of setting a time table or cut-off date for mandatory installation of the equipment on all "pre-August 2004" PLBs should be considered.

20. There are concerns over the technical feasibility and the cost burden borne by the trade if mandatory installation is to be extended. However, only about 20 existing PLBs aged over 15 years cannot be retrofitted with such equipment, and they are all approaching the end of their service life. While the cost of retro-fitment must be considered, the Administration should also give public safety due consideration in the overall assessment.

Consultation Spectrum Too Narrow

21. Prior to June 2009, TD relied mainly on its consultation with the major PLB suppliers and manufacturers to determine the technical feasibility of installation of speed limiter. On the technical aspect of installing blackboxes on PLBs, throughout all these years, TD had only consulted HKPC but had taken no follow-up action on HKPC's proposal. On the apparent sluggishness, TD repeatedly cited the need for suppliers and manufacturers to confirm that retrofitment of such equipment would not affect the product guarantee and technical support they offered.

22. TD should have adopted a broader approach by contacting other resourceful players in the field, such as academic and professional bodies, and acquiring more independent opinions. Such opinions are essential in making a thorough and balanced assessment on whether, when and how to proceed with the introduction of safety enhancement measures. While product guarantee is a valid concern, over emphasising its importance may impose unnecessary constraints in exploring alternative solutions or even become an excuse for inactivity.

Inertness towards Market Information and Overseas Experiences

23. TD was apparently inert to the availability of various models of speed limiter and blackbox in the local market. Neither was it sensitive enough to pick up relevant intelligence, such as trials on speed limiters voluntarily conducted by members in the trade (**para. 8**).

24. Shortly after TD had published its tailor-made specifications for speed limiters in August 2009, at least three local suppliers had submitted applications – with six of their product models approved quickly afterwards. Such prompt response clearly showed the maturity of the technologies and immediate availability of such products in the local market.

25. Moreover, under the regulations of the European Community and the United Kingdom on installation of speed limiter, vehicles similar to PLBs in Hong Kong were required to retrofit speed limiter in phases between January 2005 and January 2008. This shows that retrofitment of external device is technically feasible, at least for certain types of passenger vehicles. Hong Kong has undeniably lagged behind other advanced countries in introducing this safety enhancement measure.

Tampering of Device

26. TD has the responsibility to ensure compliance with the regulation on installation of speed limiter and blackbox and to deter mis-use or tampering of the devices. Besides relying on the annual examination of the vehicles at TD's centres, we consider that TD should take more monitoring measures such as conducting surprise and random checks.

Blackbox Data Use

27. Installation of blackbox can help deterring the driver from improper driving. However, other than for accident investigation, the Administration should consider enabling relevant Government experts to access, use and analyse such data under justifiable circumstances or conditions. The data collected from individual vehicles can be used in the monitoring of its operation. Statistics generated from the data of different vehicles may also be useful for reviewing the effectiveness of various safety measures, and for forward planning.

Recommendations

28. Road safety is about human lives. However, prior to June 2009, there had been a lack of due diligence in TD in fulfilling its responsibility to enhance safety of PLB operation proactively. From our findings, The Ombudsman makes the following recommendations to the Commissioner for Transport:

For Safe Operation of PLBs

- (1) to review and consider whether the requirement for installation of passenger seat belts and high back seats should be extended to PLBs registered before 1 August 2004, so as to reduce significantly the number of PLBs not retrofitted with such equipment within a reasonable timeframe;
- (2) to work out specific measures against tampering of speed limiter and blackbox installed, including surprise check or random check of vehicles;
- (3) to consider the use of data stored in blackboxes for the purposes of monitoring driving behaviour, as well as for reviewing and planning of various safety enhancement measures;

For Road Safety Initiatives in General

- (4) to set out work plans, with time schedule, for monitoring progress of each and every safety measure under study, instead of merely reacting to outburst of public pressure following each tragic traffic accident;
- (5) to consider seeking assistance from academic or professional institutions/bodies, where necessary, in assessing the feasibility of safety enhancement measures to be introduced, and in regularly reviewing the effectiveness of the measures after their implementation; and
- (6) to set up and maintain an intelligence network with relevant trades and sectors, so as to keep abreast of the latest developments of technology, regulatory mechanism and market information in and outside Hong Kong.

29. TD has accepted recommendations (2) to (6). As to recommendation (1), TD's response is not forthcoming. TD agrees only to discuss with the PLB trade and PLB suppliers on possible and viable ways to speed up the replacement progress as far as practicable.

30. We maintain the view that the slow progress over the past six years on retrofitting PLBs with passenger seat belts and high back seats has shown that TD's prediction in mid-2006 that over 60% of PLBs would be equipped with such safety equipment by mid-2008 is over-optimistic and the voluntary retrofitment scheme has been less than effective. Without more vigorous measures, it would take at least eight years for all PLBs to be equipped with passenger seat belts; and there would still be about 1,000 PLBs running on the road without such equipment by the end of 2015. We should not put more lives of PLB passengers at risk. We strongly urge the Administration to reconsider our recommendation.

Office of The Ombudsman
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