For discussion
on 19 February 2021

Legislative Council Panel on Transport
The Introduction of Alternative Means of Emergency Exits for Light Buses

PURPOSE

This paper invites Members' views on the proposed legislative amendments to introduce alternative means of emergency exits for light buses.

JUSTIFICATIONS

2. At present, under regulation 67(1) of the Road Traffic (Construction and Maintenance of Vehicles) Regulations (Cap. 374A), a light bus[1] is required to have not less than two exits[2] (one of which may be an emergency exit[3]) which shall be situated to the rear of the driver seat and not be situated on the same side of the vehicle, or one exit in the back of the vehicle. Such exits shall be of width not less than 530 millimetres and clear height not less than 1.2 metres.

[1] According to section 2 of the Road Traffic Ordinance (Cap. 374), "light bus" means a motor vehicle constructed or adapted for use solely for the carriage of a driver and not more than 19 passengers and their personal effects, but does not include an invalid carriage, motor cycle, motor tricycle, private car or taxi.

[2] According to regulation 2 of Cap. 374A, "exit" means any aperture or space provided to enable passengers to leave a vehicle.

[3] According to regulation 2 of Cap. 374A, "emergency exit" means an exit on a vehicle which is provided for use only in case of emergency as required by the regulations.

3. In 2019, the Transport Department (TD) engaged a consultant to conduct a technical study on emergency exits of light buses and review the statutory requirements and the acceptable means of escapes under different jurisdictions. As revealed in the technical study, with the advancement of technology in the automobile industry, a number of jurisdictions (such as the European Union, the Mainland China, Singapore, the United Kingdom and the United States) have adopted, in addition to emergency doors, various escape means for light buses, including emergency window[4] and escape hatch[5] (see **Annex**).

4. The aforementioned technical study has also analysed traffic accidents involving light buses in Hong Kong in 2010-2019. The analysis showed that the majority of light bus traffic accidents involved frontal collision or no impact at all, where the emergency doors as a means of escape were not affected. Furthermore, accidents involving the overturning of public and private light buses constituted only 0.2% and 0.1% respectively of their total number of accidents. In other words, the vehicles remained in upright position after the accidents in over 99% of light bus accidents. Therefore, doors and windows were the most common means of escape. As for other accidents involving collision at the side or rear of the vehicle, since the emergency doors might be damaged, it would be important to maintain an effective alternative means of emergency exit, whether in the form of door, window or escape hatch.

[4] An "emergency window" means a window intended for use as an exit by passengers in an emergency only.

[5] An "escape hatch" means an opening at the roof intended for use as an exit by passengers in an emergency only.

5. In considering whether or not to accept alternative means of emergency exits for light buses, passenger safety is of utmost priority. The impact of different design of emergency exits on the ease of escape and amount of time needed for evacuation under different circumstances need to be carefully examined. The technical study has compared the required safe egress time for passengers to get out of the vehicle in an accident, with different types and design of emergency exits. It was found that the level of safety and required safe egress time of using driver's door[6] together with emergency window and escape hatch as a means of escape was similar to that of using an emergency door in a light bus under different collision scenarios (including the vehicle maintaining an upright position, turning sideways or turning upside down after the accident). Therefore, the technical study concluded that with the use of such alternative means of emergency exits in light buses, passenger safety during emergency situations would be equally upheld.

6. As an international city, on the basis that our foremost priority on passenger safety will not be compromised, a regular review and update of vehicle standards to keep in pace with widely recognised vehicle safety standards internationally is deemed desirable. Furthermore, allowing alternative means of emergency exits for light buses would enable more flexibility in the design of the vehicles, such that manufacturers could adopt other means of emergency escape applicable to light buses to cater for the Hong Kong market. This will facilitate the introduction of more vehicle models into Hong Kong, allowing more choices for the transport trades.

[6] A "driver's door" is the door next to the driver's driving seat leading to the exterior of the vehicle.

RECOMMENDATIONS

7. Pursuant to the Road Traffic Ordinance (Cap. 374), the Secretary for Transport and Housing may make regulations with respect to, inter alia, the design and construction of any vehicle intended for use as a private light bus or public light bus, and the construction and maintenance of doors, entrances and exits of public service vehicles. Taking into account the considerations set out in paragraphs 4 to 6 above, the Government proposes to amend the existing regulations so as to allow for the introduction of alternative means of emergency exits for light buses. Under the proposal, while the current requirements on the design and specification of light bus emergency doors will be preserved, light bus manufacturers may also use the driver's door, emergency window and escape hatch together in replacement for the emergency door to satisfy the legal requirement on emergency exits for light buses, upon meeting the specified technical requirements, including the access requirement of the driver's door, and the location and dimensions of the emergency window and escape hatch, etc. The design of the vehicles, including escape facilities, must pass the vehicle type approval and vehicle examination under TD.

8. In addition, regulation 67(1)(b) of Cap. 374A currently allows vehicles to have only one exit at the rear without any other exits. As such design is outdated and no longer used in Hong Kong, we propose to remove the relevant clause from the legislation.

TRADE CONSULTATION

9. With regard to the above amendments on the legal requirement for emergency exits of light buses, the light bus manufacturers and public light bus

trade have been consulted on the above proposal. They in general welcomed the proposed legislative amendments to introduce an alternative means of emergency exits for light buses and did not express any objection.

ADVICE SOUGHT

10. Members are invited to comment on the above proposal to facilitate the Government's further preparation work for the relevant legislative amendments.

Transport and Housing Bureau
Transport Department
February 2021

Annex

Summary of Acceptable Means of Emergency Exits for Light Buses under Different Jurisdictions

Acceptable Means of Emergency Exit	Jurisdiction
• Emergency door *(only)*	Australia
	Hong Kong
	Japan
	Macau
• Emergency door/ Driver's door • Emergency window • Escape hatch	European Union
	Mainland China
	Singapore
	United Kingdom
	United States