

# Experts call for new guardrail tech to enhance road safety

**KUALA LUMPUR:** Experts have called for the authorities to rethink the use of current guardrails on roads and consider using newer technology to absorb hits from heavy vehicles and diffuse kinetic energy.

The call comes after 15 people died in a bus crash in Gerik, Perak, on Monday.

The accident saw a section of the metal guardrail pierce through the bus interior, leaving many to question the safety of using such methods.

Transport consultant Wan Agyl Wan Hassan said while it was premature to determine if the steel guardrail had caused injury to any of the victims, it was clear that they did not function to ef-

fectively dissipate the force of a crash.

"Guardrail impalement incidents often arise when the guardrail end terminal fails to perform its critical safety function of absorbing and redirecting crash energy.

"Instead, poorly designed guardrails can cause it to detach, bind or remain rigid, turning it into a dangerous spear that penetrates vehicles and causes catastrophic injuries," he told the *New Straits Times*.

Wan Agyl said over time, steel guardrails could become rusty or corroded, weakening them and making them less effective at absorbing impact.

Associate Professor Dr Law

Teik Hua, who heads the Road Safety Research Centre at Universiti Putra Malaysia, said images of the initial crash highlighted a critical failure in guardrail safety.

"This type of failure significantly increases the risk of severe injuries or fatalities for vehicle occupants. Guardrails are designed to redirect vehicles and dissipate kinetic energy, but in this case, the structure acted more like a spear, compromising passenger safety.

"This suggests either a flaw in the design, improper installation, or a mismatch between the guardrail's specifications and the vehicle type involving its height or weight," he said.

He said modern, energy-absorbing guardrails, such as those compliant with the Manual for Assessing Safety Hardware standards, were engineered to deform progressively, reducing the force transferred to occupants.

"Flexible barrier systems, like high-tension cable rails, are another alternative, as they stretch upon impact to slow the vehicle more gradually.

"Additionally, impact attenuators — often filled with crushable materials — are effective in absorbing energy near fixed obstacles like bridge supports."

Miros chairman Prof Wong Shaw Voon said the guardrail in question was not suitable for large and heavy vehicles.

"Our analysis of the incident will take into consideration all aspects of road safety, including the type of guardrail used as well as the speed that the affected vehicles were travelling at when the incident occurred," he said.

Yesterday, Transport Minister Anthony Loke acknowledged public criticism over the outdated condition of road barriers.

He said while the East-West Highway falls under the Works Ministry, he would raise the matter at the cabinet meeting today to discuss urgent steps for improvement.

"We take this matter very seriously, and there is a need for cooperation across various ministries."