

1. Does TfL have views on the critical components of a Vision Zero programme for buses?

TfL's Bus Safety Programme follows the Safe System model, an internationally recognised approach to road danger reduction that follows these principles:

- People make mistakes so our transport system needs to accommodate human error and unpredictability
- There are physical limits to the kinetic energy that the human body can tolerate. Our transport system needs to be forgiving, so that the forces involved in a collision are not sufficient to cause fatal or serious injury
- All those with a role in designing, building, operating, managing, enforcing and using our streets have a responsibility to reduce danger

This approach is centred on five key themes to drive improvements to ensure that all parts of the system are strengthened.

- Safe speeds: Ensuring buses do not go above the speed limit, and travel safely in all conditions.
- Safe behaviours: Building knowledge and awareness to encourage safe behaviours.
- Safe streets: Reducing road danger at locations where the likelihood of injury is higher, and designing an environment that is forgiving of mistakes and encourages sustainable and active travel.
- Safe vehicles: Reducing the road danger risk posed by buses through innovative technology and physical changes to improve vehicle safety.
- Post-collision support and investigation: Understanding and learning from the causes of collisions is fundamental to helping to prevent their recurrence. It is vital that we work with our partners to ensure anybody affected by a collision receives the support they need and deserve, including signposting victims of collisions to appropriate restorative justice and post-collision services.

Underpinning the above principles is a drive for a culture change within the bus industry to ensure that safety is at the heart of everything we do. Our specific bus safety programme tends to focus on the topics under direct operational control, ie bus vehicle design and driver training/behaviour/welfare. Other safe system pillars such as highway design tend to be picked up in our wider Vision Zero programme.

2. How are the bus elements of the programme managed on practical basis?

TfL's Bus Safety Programme requires management across many parts of our organisation, including Bus Operations; Engineering; Safety, Health and Environment; Investment Delivery Planning; Streets & Network Operations; and others.

- TfL's Bus Operations team manages our relationship with the bus operating companies, ensuring they are adhering to their contractual and legal responsibilities for safe operation, as well as trialling and delivering safety enhancements to our vehicles and bus driving standards.
- Engineering is responsible for our management and compliance with our Bus Vehicle Specification which incorporates our Bus Safety Specification, and for compliance monitoring of the engineering performance of each bus operator.
- Our Safety, Health and Environment team investigates incidents and ensures actions and lessons from incidents are learned and applied across our operations
- Investment Delivery Planning plans and delivers safety improvements to London's road network, including working with London boroughs on borough-owned roads.
- Streets & Network Operations is responsible for maintaining, renewing and improving bus infrastructure including bus stations. Their Surface Control Centre also works with other TfL teams and bus operators to manage incidents as they occur.

Buses used on TfL route contracts must meet TfL's vehicle specification. It is TfL's role to both monitor compliance with this specification (as above) and also to continually look to enhance it – for example with additional safety features and technologies. To this end, TfL has a programme of research and trials to identify and evaluate countermeasures to collision trends we see in London. Our work is evidence based: for an update to be made to the specification it must be proven to be beneficial. Whilst generally funded by TfL, this innovation and research is done collaboratively with our operators, vehicle manufacturers and other stakeholders – taking on feedback ensures that vehicle design changes are operationally viable and do not introduce unintended risks. Where funding allows, it is technically possible and there is a good business case for doing so, TfL may choose to retrofit certain safety features to older buses which were brought into service before more recent versions of the vehicle specification applied.

3. Can TfL share any information on the costs of implementing the bus safety programme/Vision Zero for buses, since its inception?

This is challenging to assess in the round. Elements of the cost can be isolated, for example the costs of research and trials of new features and the costs to retrofit specific safety features on existing buses. We would be happy where appropriate and not commercially sensitive to share information of this type.

However, the total cost of our Bus Safety Programme is intertwined with many other non-safety programmes. For example, incorporating our Bus Safety Specification into TfL's vehicle specification does have the potential to create some cost within new vehicles, but isolating the safety-specific elements of this separate from improvements to environmental, customer and mechanical performance is challenging, and buses are procured by our

operators rather than by TfL directly so we do not pay the upfront cost of buses but rather this cost is incorporated in the overall contract cost. Budget is allocated to account for the increase cost to manufacturers of delivering the Bus Safety Standard requirements, so this can be separated from the contract cost.

Similarly, Safe Streets interventions are rarely bus-specific but may see street improvements delivered for all road users, with buses being an element of this but not the only part, so a bus-only cost element is not possible to identify. Impacts on bus performance (and therefore revenue and cost) from Safe Streets schemes are complex and again difficult to identify in isolation (and can be positive or negative depending on the specifics of each scheme).

4. How have TfL been involved in helping shape other Vision Zero programmes, with a focus on bus, across the country?

We regularly share knowledge with the bus industry and wider stakeholders through ongoing project engagement and we publish research and data on our website. Sharing research and data is important in encouraging and enabling the development of new technology, which in turn helps to bring down the costs of implementing the technology in London and elsewhere. We have also spoken with several other cities and transport authorities from across the UK and worldwide who have expressed an interest in our bus safety programme. This includes through TfL's membership of the International Bus Benchmarking Group, a forum for sharing best practice internationally.

TfL has also worked closely with the DfT's Bus Centre of Excellence to launch and run the Bus Knowledge Sharing and Incident Network. This group brings together safety experts and bus professionals from across the national industry to share learning, build best practice and influence the policy and regulatory direction of safety for the bus industry.

5. From a legal perspective, does the legal basis for Vision Zero/bus safety standards fall under the Mayor's general transport duty and the Transport Strategy?

Promoting and encouraging safe transport facilities and services is part of the Mayor's general transport duty and is referenced within the GLA Act.

Maintaining safe operation of bus services (but not specifically Vision Zero) is a legal requirement per both road traffic and health and safety legislation. This includes the requirement for all bus operating companies to hold a valid Public Service Vehicle (PSV) Operator Licence (O Licence) and to adhere to requirements set by the Traffic Commissioner and administered by the Driving and Vehicle Standards Agency (DVSA).

S142 of the GLA Act 1999 requires the Mayor to set out a Transport Strategy. Within the current MTS the Mayor has made a specific commitment to Vision Zero as a specific objective and as a key enabler of other strategic outcomes, such as a target 80 per cent mode share. The current MTS also includes a specific target for bus safety performance as part of the Vision Zero target outcomes.