CLOCS and Direct Vision Standard

Improving vehicle safety through manufacture and design

CLOCS objective
Increased availability and uptake of new lorries with 100 percent all-round vision and maximum driver direct vision.

CLOCS objective
All existing lorries are fitted with appropriate all round vision equipment as standard.

• Workstream 1 - Improving vehicle safety through manufacture and design
• ‘Safer Trucks’ programme of work
• ‘As well as’ not ‘in place of’ CLOCS
Protecting all vulnerable road users

In 2016, **13 pedestrians** and **4 cyclists** were killed by HGVs in London*

*Provisional data

Pedestrian incidents continue to be under-represented and under-reported in the media
The Blindspot
What is Direct Vision?

**Indirect vision** – What the driver can see through mirrors or cameras

**Direct vision** – what a driver can see through the windows rather than using mirrors or cameras
What is the Direct Vision Standard?

Objective
To allow objective measurement and categorisation of HGVs based on their Direct Vision capability with respect to vulnerable road users

Developed to:
• Categorise HGVs based on their direct vision capability
• Inform operator purchasing decisions
• Guide manufacturers to design cabs to meet progressive standards
• Use in procurement clauses
• Lobby for inclusion within changes to regulation

Vehicles meeting the higher vision standards will have a much reduced blind-spot allowing better visibility of vulnerable road users
The case for Direct Vision

Exploring the road safety benefits of Direct Vision

- Understand the benefits of seeing vulnerable road users directly as opposed to indirectly
- Establish the extent to which increased direct vision could reduce driver reaction times
- Establish the extent to which increased direct vision could reduce collisions between HGVs and vulnerable road users

1. Literature review
2. Surveys
3. Laboratory experiments
There are a number of risks related to relying on mirrors for safe driving and glancing at VDUs when driving:

- Indirect vision increases cognitive load – put simply; it's hard to think of lots of things at once.
- Processing indirect visual information can result in impaired driver performance.
The case for Direct Vision  - Exploring the road safety benefits of Direct Vision

2 Surveys – pedestrians, cyclists and HGV drivers

- Do not trust HGV drivers can see them through their mirrors or VDUs
- Lower cab height and larger windows are safer
- Eye-contact with HGV drivers makes them feel safer when passing a vehicle

- Do not trust HGV drivers can see them through their mirrors or VDUs
- Agree that drivers positioned lower to the ground see them more easily
- 86% of cyclists agree that drivers who have larger windows and ‘bus style’ doors see them more easily
- Eye-contact with HGV drivers makes them feel safer

- Mirrors provide sufficient view - but sometimes difficult to recognise a cyclist in a mirror
- More advantages than disadvantages of VDU use
- Disagree that they are too high up to locate road users
- Most drivers try to make eye-contact with road users and believe this reduces likelihood of collision
The case for Direct Vision

3 Laboratory experiments

Indirect vision responses were on average 0.7s slower compared to Direct viewing responses. This results in:

<table>
<thead>
<tr>
<th>Speed</th>
<th>Extra Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 mph</td>
<td>4.7m</td>
</tr>
<tr>
<td>10 mph</td>
<td>3.1m</td>
</tr>
<tr>
<td>5 mph</td>
<td>1.5m</td>
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</tbody>
</table>

- Exploring the road safety benefits of Direct Vision

Indirect vision resulted in increased incidence of simulated pedestrian collisions by 23%.

Driving whilst processing a cognitive task increases this incidence even further - by 40%.
The case for Direct Vision
Live trials and evaluation
The case for Direct Vision

Live trials and evaluation

I feel much more confident driving in the higher vision cab. I don’t want to go back to a standard tipper.

As a lorry driver, it pains me to say this, but it’s actually pretty good.

I wouldn’t want to go back in another tipper, I’d much rather be this low down. I can’t see why all lorries aren’t like this.

You just need to sit in one of the old cabs then get in the new one to realise how important this change is.

I’d say just give it a go, it’s opened my eyes. I didn’t see how it could be improved before.

Will I be able to get onto landfill sites?
Mayoral Commitments

On 30 September 2016, the Mayor launched the world’s first Direct Vision Standard to improve the safety of vulnerable road users and made the following commitments:

- Restrict ‘zero star’ rated vehicles from entering London by 2020
- Allow only a minimum of three-star direct vision rated vehicles only by 2024.

“‘I will adopt a ‘Vision Zero’ approach to road safety, which puts the elimination of road danger at the very heart of the transport system... working with industry to make lorries safer’”
DVS Consultation

1. Consultation on Proposed Direct Vision Standard for Heavy Goods Vehicles
   24 January to 18 April
   https://consultations.tfl.gov.uk/roads/direct-vision-standard-phase-1/

2. Analyse and publish the responses to Phase 1 consultation.
   Spring/Summer 2017

3. Complete and publish Integrated Impact Assessment of the DVS scheme
   Autumn 2017

4. Full policy consultation on the final proposals for the scheme
   Autumn 2017

5. Statutory consultation on the appropriate regulatory measure
   Spring 2018
Thank you

Hannah White
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