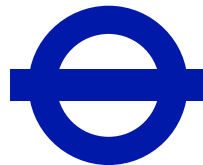


14 MARCH 2017

Direct Vision Standard

Hannah White
Transport for London



EVERY JOURNEY MATTERS

CLOCS and Direct Vision Standard



- Workstream 1 - Improving vehicle safety through manufacture and design
- 'Safer Trucks' programme of work
- 'As well as' not 'in place of' CLOCS

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

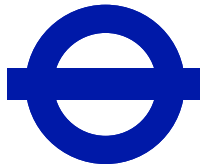
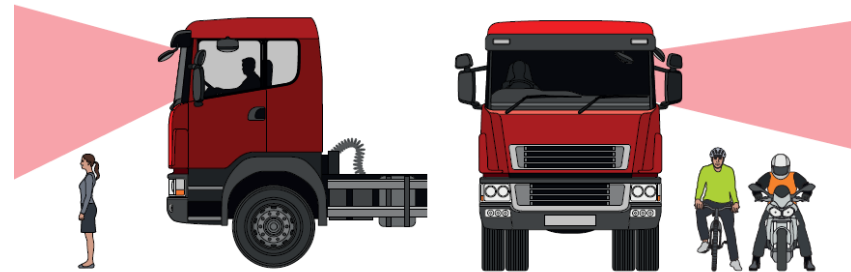
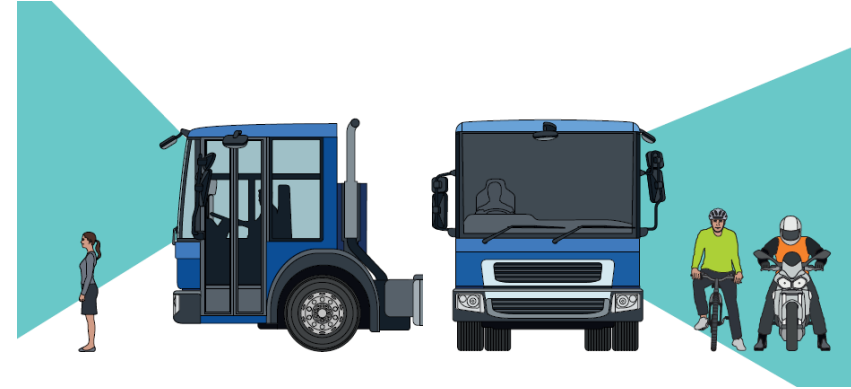


Protecting all vulnerable road users

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



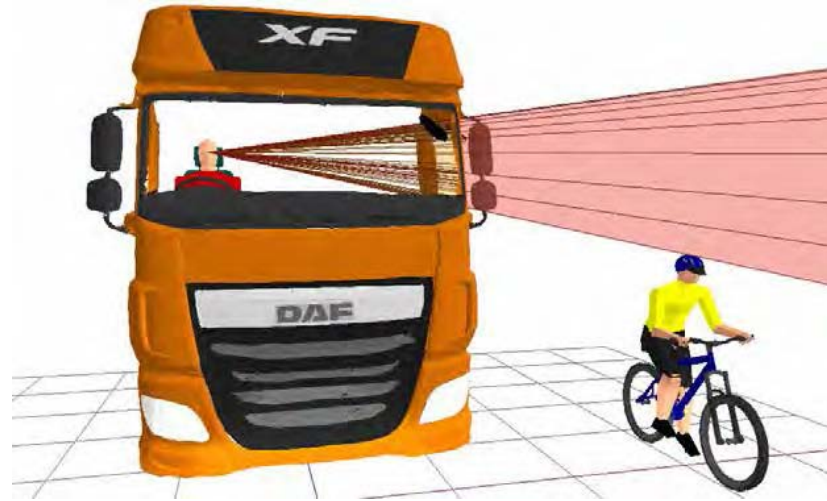
The Blindspot



5

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



7 The case for Direct Vision

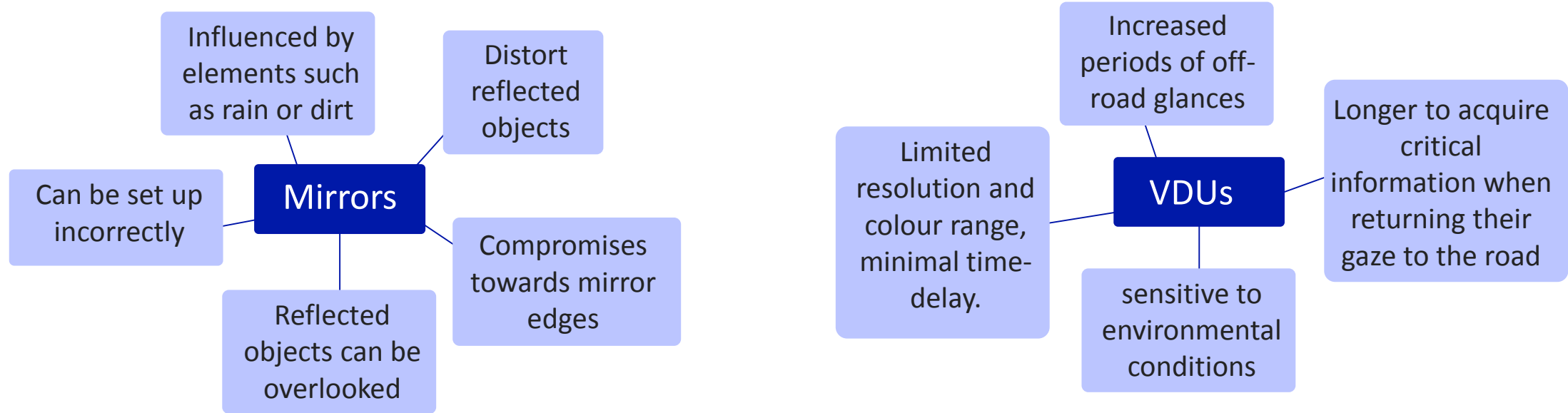
Exploring the road safety benefits of Direct Vision

- 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



1 Literature review



- 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; its 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

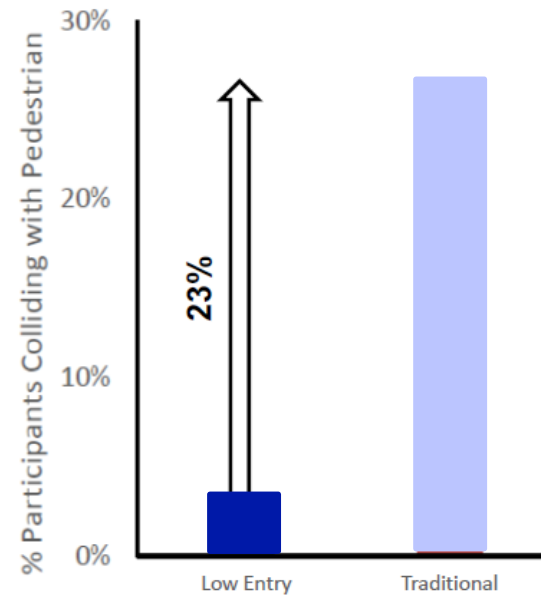
3 Laboratory experiments

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

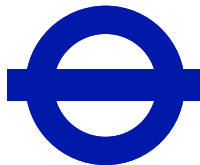
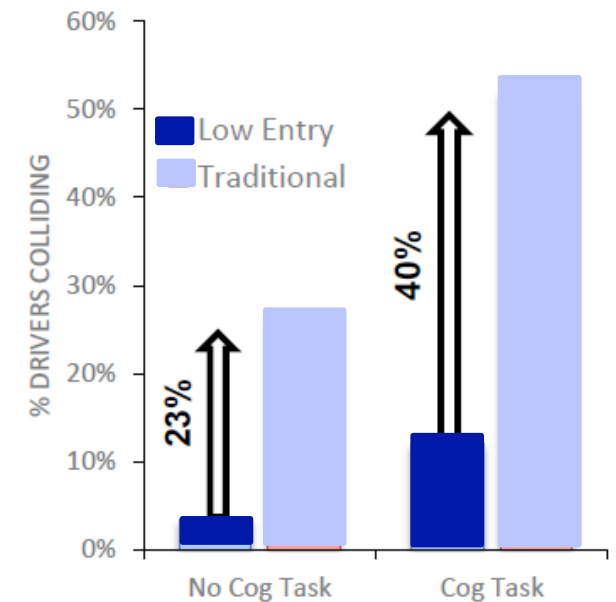
Speed	Extra Travel
15 mph	4.7m
10 mph	3.1m
5 mph	1.5m

- 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

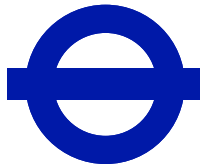
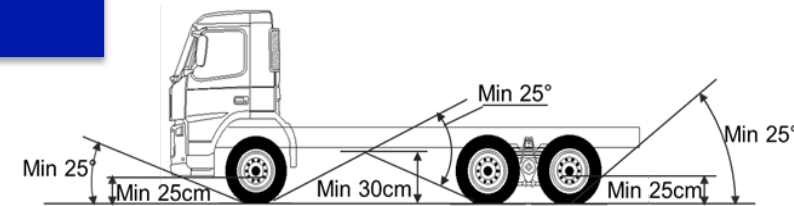
As a lorry driver, it pains me to say this, but its actually pretty good

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

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 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

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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Transport for London



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