Impact Assessment of the London Safer Lorry Scheme

July 2014
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1. Introduction

In January 2014 TfL published *Safer Lorry Scheme: The Way Forward*¹. This was a feasibility study considering the feasibility of options for improving the safety of all Heavy Goods Vehicles (HGVs) over 3.5 tonnes operating in London. The recommendation from the study was to introduce a pan-London Traffic Regulation Order (TRO) to prohibit HGVs not meeting specific vehicle safety standards from travelling on London’s roads. This would improve overall road safety in London.

The scheme would apply on all London’s roads at all times, other than on the Low Emission Zone exempted streets. The scheme would be enforced using criminal enforcement with the potential of moving to the use of existing civil enforcement legislation and infrastructure, subject to the outcome of the policy consultation and subsequent action from the Department for Transport (DfT).

In developing the proposal, TfL considered three options for scheme implementation, which are all assessed here. The impacts of all three options on the criteria assessed are the same and though there may be identifiable differences arising from pursuing any one option, this is not apparent from the impact assessment. The scheme is based on a Traffic Regulation Order (TRO) as this is the most cost-effective option, as demonstrated in the Feasibility Study described above.

In assessing the impacts of TfL’s Safer Lorry Scheme (SLS), it is also important to note the forthcoming changes to the Individual Vehicle Approval (IVA) requirements. From October 2014, side guards will be required on all new vehicles, with very few exemptions. This will mean that the majority of new construction vehicles, currently exempted from the requirement to fit side guards, will need to have this safety equipment as standard. These regulations apply nationally, whereas the Safer Lorries scheme, as a Mayor and TfL proposal, would apply only to London.

This IIA considers the impacts of the Safer Lorry Scheme, which would be implemented by TfL and London Councils subject to consultation.

2. Purpose and structure of the impact assessment

This assessment considers the economic and business, equalities, health and safety and environmental impacts of the three options considered for introducing a Safer Lorry Scheme in London. The data used in this assessment is the same as in the Feasibility Study and is not repeated in full here.

The structure of this assessment is as follows:

| Section 3 | Description of the Safer Lorry Scheme proposal including the options considered in the feasibility study |

3. **Proposal for a Safer Lorry Scheme**

Safer Lorry Scheme: The Way Forward identified three options for introducing a Safer Lorry Scheme (see Table 1 below) and assesses the five year costs and benefits for each option.

Other than those vehicles exempted from the proposed Safer Lorries scheme, all three options would require the same safety equipment to be fitted to HGVs: Class V and Class VI mirrors and side guards. The same number of vehicles would be affected regardless of the implementation option and all three options would apply at all times on all of London’s roads.

Vehicles registered prior to 2000 were not required to have Class V mirrors and vehicles registered prior to 2007 were not required to have Class VI mirrors. Certain vehicles mainly used in construction are exempt from the requirement to fit side guards.

Despite these exemptions, some operators have fitted the equipment as a matter of good practice or because of contractual requirements. Based on discussions with the industry, it is estimated that 50% of vehicles currently exempt from the national regulations have fitted side guards and mirrors. The feasibility study estimated that in London, between 2,500 and 7,500 vehicles would be required to fit side guards and between 1,250\(^2\) and 18,500 vehicles would be required to fit extended view mirrors.

**Table 1: Options for a Safer Lorry Scheme**

<table>
<thead>
<tr>
<th>Option 1</th>
<th>TfL to introduce a Road User Charging Scheme Order for a Safer Lorry Charge enforced through Automatic Number Plate Reader cameras (ANPR); i.e. a road user charging scheme where only Heavy Goods Vehicles (HGVs) meeting required safety standards can travel in London free of charge. The Department of Transport (DfT) would need to approve signage changes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 2</td>
<td>TfL to work with London Councils to make a &quot;Pan-London&quot; Traffic Regulation Order(s) (TRO) to prohibit HGVs not meeting required safety standards from using London’s roads. DfT would have to approve new signage. This will be enforced as a criminal offence, and a Fixed Penalty Notice (FPN) issued at the roadside. There is the potential to move to civil enforcement in the future, with a Penalty Charge Notice (PCN) issued using CCTV systems and on street traffic enforcement officers. DfT would have to approve changes to moving traffic legislation for any move to civil enforcement.</td>
</tr>
<tr>
<td>Option 3</td>
<td>Introduce a hybrid approach adopting option 2 and developing option 1 in parallel.</td>
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</tbody>
</table>

\(^2\) In August 2014 this figure was corrected to 1,250 (earlier version had incorrectly stated 9,500)
4. Methodology

The three options and the ‘do nothing’ scenario have been assessed against each of the broad criteria below:

- Economic and business impacts
- Equalities impacts
- Health and safety impacts
- Environmental impacts

Section 5 sets out the assessment in full. For each criterion, the context, the expected trend under the status quo, an assessment of the impact and the mitigation measures considered have been provided.

This assessment has identified quantifiable data where possible, and the analysis of impacts is based on the currently available information. In particular, it draws on Section 5 of the Feasibility Study which assesses the options on a number of criteria. The identification of the impacts has broadly relied on qualitative data and professional judgement to determine the relative significance and severity or scale of the impacts.

The options have been assessed using the following scale:

<table>
<thead>
<tr>
<th>Minor negative</th>
<th>Significant negative</th>
<th>Neutral</th>
<th>Significant positive</th>
<th>Minor positive</th>
<th>Not relevant</th>
</tr>
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<tbody>
<tr>
<td>++</td>
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<td>++</td>
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<td>++</td>
</tr>
</tbody>
</table>

5. Assessment

This section summarises the assessment of the three options against each of the criteria considered. It includes the context, the expected trends under status quo, the assessment findings and mitigation measures where needed.

5.1. Economic and Business impacts

Context

Each of the three options incurs the same cost to operators; retrofitting side guards costs around £500 and mirrors around £300 per mirror\(^3\) including both the equipment and fitment costs. It is estimated that total costs to all operators could be up to £10.3m. The cost benefit analysis assumes that 50% of vehicles registered in London and the South east that are exempt from the safety requirement have already retrofitted the equipment. Not all operators will need to retrofit as a result of the proposal; some may reorganise their fleet and work programme to avoid London and others may retrofit for other reasons such as to qualify for contracts where this is required. The feasibility study assumed the cost of a fatality to be £1,914,229 and the cost of a serious collision to be £218,109.

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\(^3\) In August 2014 this was corrected from ‘per vehicle’ in an earlier version
Expected trends under status quo (do nothing)
Over time, the proportion of the HGV fleet without Class V and Class VI mirrors will diminish due to vehicle replacements as newer vehicles come onto the market which will be fitted with the required mirrors in line with the latest regulations.

The new IVA requirements mean that from October 2014, all new vehicles will require side guards. Therefore over a longer time frame, as newer vehicles come onto the market the proportion of the HGV fleet not fitted with side guards will also diminish.

However, these regulations will only take full effect once the majority of the exempted vehicle fleet has been replaced.

As described below, companies can also benefit from fitting this equipment because it enables them to bid for a greater range of contracts.

Continued construction activity in London and the associated construction vehicle activity on the roads as well as increases to the number of cyclists in London will provide an increased opportunity for collisions between HGVs and cyclists and pedestrians.

Assessment findings
In terms of the overall economic impact to businesses from fitting equipment, the costs and time involved are relatively small, though this will still result in a negative impact. This is the same for all three delivery options. Larger firms are likely to find this cost easier to absorb than Small and Medium size Enterprises (SME).

Companies that do fit the additional safety equipment may benefit in as much as it will enable them to apply and qualify for contracts which require the additional safety equipment.

There may be a very small positive effect with regard to general congestion benefits associated with reducing delays due to collisions. In 2010/11, 28 per cent of the congestion on the Transport for London Road Network (TLRN) was estimated to be caused by collisions. Reducing collisions can make a significant contribution to these wider impacts.

All options may involve company accreditation and associated costs which fall to businesses. These would most likely be small.

Overall, the economic and business impacts are assessed as having a small negative impact for all options, largely due to the cost of installing the required safety equipment.

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<table>
<thead>
<tr>
<th>Economic and business impacts</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
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</thead>
<tbody>
<tr>
<td>Do nothing</td>
<td>Safer Lorry Charge</td>
<td>Pan-London TRO</td>
<td>Hybrid option</td>
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<td>0</td>
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</table>

**Mitigation**

There is no mitigation for cost, however TfL will undertake a communications campaign directed at the entire freight sector in order to allow companies affected to better plan any required retrofit expenditure and / or their operations. The campaign will include relevant information directed at smaller companies that will be most affected.

5.2. **Equalities impacts**

**Context**

As a public body, TfL is subject to the equality duty created under the Equality Act 2010. Section 149 of the Equality Act sets out the general equality duty, which requires TfL and the Mayor to have due regard to the need to:

- Eliminate unlawful discrimination, harassment and victimisation
- Advance equality of opportunity between different groups, and
- Foster good relations between different groups.

The general equality duty covers protected characteristics, including age, disability, sex, gender reassignment, pregnancy and maternity, race, religion or belief and sexual orientation. In line with best practice TfL also considers the needs of groups who also have the potential to be socially excluded, namely: people on low incomes; refugees and asylum seekers; the homeless; and jobseekers.

**Expected trends under status quo (do nothing)**

Over time, the proportion of the HGV fleet without Class V and Class VI mirrors will diminish due to vehicle replacements as newer vehicles come onto the market which will be fitted with the required mirrors in line with the latest regulations.

The new IVA requirements mean that from October 2014, all new vehicles will require side guards. Therefore over a longer time frame, as newer vehicles come onto the market the proportion of the HGV fleet not fitted with side guards will also diminish.

However, these regulations will only take full effect once the majority of the exempted vehicle fleet has been replaced. As such the national regulations will have less adverse impact with respect to equalities than the SLS proposal, which is appraised below.

As described below, companies can also benefit from fitting this equipment because it enables them to bid for a greater range of contracts.
Assessment findings

Black and minority ethnic (BME) groups are over represented as owners in small and medium size enterprises (SME). Smaller companies will find the costs of fitting the additional safety equipment to be most significant. As a result the impact on BME groups working in this sector will be negative, although it is not possible to quantify this precisely.

This impact will be small and therefore a more detailed equalities impact assessment will not be required.

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<tr>
<th></th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
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<tbody>
<tr>
<td></td>
<td>Do nothing</td>
<td>Safer Lorry Charge</td>
<td>Pan-London TRO</td>
</tr>
<tr>
<td>Equalities impact</td>
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Mitigation

TfL will undertake a communications campaign directed at the entire freight sector but will also focus communications towards smaller companies to increase awareness and to allow better planning by those most affected.

5.3. Health and Safety impacts

Context

HGVs are proportionally over represented in fatal collisions with cyclists and pedestrians, with 53 per cent of pedal cycle fatalities between 2008 and 2012 involving direct conflict with an HGV. In 2011, seven of the nine large goods vehicles involved in a fatal cyclist collision were construction vehicles.

Expected trends under status quo (do nothing)

Over time, the proportion of the HGV fleet without Class V and Class VI mirrors will diminish due to vehicle replacements as newer vehicles come onto the market which will be fitted with the required mirrors in line with the latest regulations.

The new IVA requirements mean that from October 2014, all new vehicles will require side guards. Therefore over a longer time frame, as newer vehicles come onto the market the proportion of the HGV fleet not fitted with side guards will also diminish.

However, these regulations will only take full effect once the majority of the exempted vehicle fleet has been replaced.

As described below, companies can also benefit from fitting this equipment because it enables them to bid for a greater range of contracts.
Increasing the proportion and total number of cycling trips is a mayoral priority and cycling across London will double in the next 10 years. There is also continued growth of construction activity in London – counter to the national trend – and hence construction vehicle activity on the roads is also increasing. As the number of cycling trips and construction vehicles on London roads increases, the opportunity for collisions may increase. For this reason the ‘do nothing option’ would have a negative impact.

Assessment findings

The Transport Research Laboratory (TRL) study – Safer lorries in London, estimated that the presence of the specified safety equipment on all HGVs exempted from national safety regulations would mean that between 3.20 and 6.85 fatalities and between 1.24 and 4.75 serious casualties could have been prevented in the five year study period. These are the anticipated casualty reductions from fitting the required safety equipment.

All three options have a positive impact on safety. There is no difference between the three options in terms of expected compliance rate, so all have been scored as having a positive impact.

The cumulative effect of these reductions in casualties over time and along with other road safety initiatives in London will also be positive.

An increase in the perception of safety for cycling will help to increase the number of people cycling. Because cycling is an active mode of travel it confers health benefits to the individual, which is another small positive impact on health.

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<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
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<tbody>
<tr>
<td>Health and</td>
<td>-</td>
<td>+</td>
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<tr>
<td>Safety</td>
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Mitigation

No mitigation measures are necessary as the assessment has only identified positive impacts on health and safety.

5.4. Environmental impacts

Context
Transport schemes often have a significant impact on a range of environmental issues including air quality, water drainage, traffic noise, the urban realm and climate change.
The Mayor has a legal obligation to meet national and European targets for air quality in London and is required to take action with a view to mitigating or adapting to climate change and the consequences of climate change. The Mayor has also committed to reduce London’s CO₂ emissions by 60 per cent from their 1990 levels by 2025.

Central Government is committed to reducing the level of unnecessary street signage. This is also in line with the Mayoral commitment to working to deliver better streets. A key part of the delivery of better streets is the reduction in the overall street clutter which includes a reduction in signage.

**Expected trends under status quo (do nothing)**

Over time, the proportion of the HGV fleet without Class V and Class VI mirrors will diminish due to vehicle replacements as newer vehicles come onto the market which will be fitted with the required mirrors in line with the latest regulations.

The new IVA requirements mean that from October 2014, all new vehicles will require side guards. Therefore over a longer time frame, as newer vehicles come onto the market the proportion of the HGV fleet not fitted with side guards will also diminish.

However, these regulations will only take full effect once the majority of the exempted vehicle fleet has been replaced.

**Assessment findings**

A Safer Lorry Scheme will have very little impact on the age of the vehicle fleet and no influence on distances travelled. A very small reduction in the age of the vehicle fleet may occur as owners may choose to replace non-compliant vehicles earlier than planned with newer compliant vehicles. If this does happen, it would have a very small positive impact on air quality and on noise resulting from using newer less polluting vehicles which are often quieter too.

The SLS is not expected to have any impact on water drainage or climate change. This is because these are all very much impacted on vehicle distances travelled, works taking place and the design and style of infrastructure being built.

The additional street signage required for enforcing all options will have a negative impact on the urban realm.

<table>
<thead>
<tr>
<th>Environmental impacts</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do nothing</td>
<td>Safer Lorry Charge</td>
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</table>
Mitigation

The negative environmental impact from signage will be mitigated by ensuring all signs are introduced with the minimum impact on the streetscape possible. Wherever feasible, existing posts would be used for all new signs and consideration for the local environment will be taken into account.

6. Assessment summary

The overall impacts of introducing the Safer Lorry Scheme are as follows:

1. There will be a positive impact to health and safety from the reduction in the numbers of cyclists and pedestrians killed or seriously injured and also from any increase in cycling that results from an overall safer cycling environment.

2. There will be a small negative impact to small businesses from the cost of fitting the additional safety equipment. This will particularly impact BME groups who are more prevalent in small businesses. This will be addressed through a communications and awareness campaign alerting small businesses to the changes required and the reasons for introducing the changes.

3. There will be a small negative impact to the urban realm resulting from the additional street signage required. This will be mitigated through ensuring that new signs are sensitively positioned with minimal use of additional posts and with consideration for the local environment.

Table 3 provides a summary of the assessment information provided in section 5.

Table 3: Assessment of the relevant MTS objectives and impact of the options on them

<table>
<thead>
<tr>
<th></th>
<th>Do nothing</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic and business impacts</td>
<td>0</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>Equalities impact</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Health and safety impacts</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Environmental impacts</td>
<td>0</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>
7. **Conclusions**
This assessment shows that all three of the scheme options have a small positive impact on health and safety and a small negative economic impact.

In London, the SLS would have a more positive impact on safety than a ‘do nothing’ scenario. The change to the IVA regulations will have a positive impact in London and nationally but this is limited by its applying only to new vehicles from October 2014.

Although the overall quantitative impact of the Safer Lorry Scheme is relatively small (in terms of forecast reductions in the absolute numbers of KSIs), it will have a positive impact on road safety and is important in terms of contributing to the overall strategy for increasing cycling and improving cyclist and pedestrian safety. For this reason the impact of the Safer Lorry Scheme needs to be considered as part of the cumulative impacts of a wide range of initiatives to improve cycling and pedestrian safety in London. The negative environmental impact of signage will be managed through careful consideration of the local environment in all locations.

It will be important for TfL to engage with the freight industry and in particular the construction vehicle industry to implement the scheme and to ensure that the scheme is workable, well understood and effective. TfL will also need to promote the scheme to the industry and provide information and advice about the purpose and fitting of the required safety equipment. The scheme aims to achieve high compliance from the start.