Workplace transport safety

A brief guide

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Introduction

Every year, there are over 5000 accidents involving transport in the workplace. About 50 of these result in people being killed (www.hse.gov.uk/statistics).

The main causes of injury are people falling off vehicles, or being struck or crushed by them.

This guidance has been produced by the Health and Safety Executive (HSE) to help people involved in workplace transport reduce the chances of accidents happening. It is mainly aimed at managers but operators and their safety representatives will also find it useful.

Employers have a legal duty to ensure that the health and safety of their employees, contractors and members of the public are not put at risk as a result of the work they do. Employees and the self-employed also have a duty to look after their own health and safety and that of anyone who might be affected by their work.

What is workplace transport?

Workplace transport is any activity involving vehicles used in a workplace. Vehicles driven on public roads are excluded, except where the vehicle is being loaded or unloaded on a public road adjacent to a workplace.

Managing workplace transport safety

To manage workplace transport effectively, there are three key areas to consider when carrying out your risk assessment:

- safe site (design and activity);
- safe vehicle;
- safe driver.

Safe site – design

Segregation

Every site is different and likely to present different hazards and risks. However, a well-designed and maintained site with suitable segregation of vehicles and people will make workplace transport accidents less likely.

The most effective way of ensuring pedestrians and vehicles move safely around a workplace is to provide separate pedestrian and vehicle traffic routes. Where possible, there should also be a one-way system as this will reduce the need for vehicles to reverse, and will help pedestrians and drivers.

Your circumstances might mean that complete segregation is not possible, so you would need to have clearly marked pedestrian and vehicle traffic routes, using measures such as barriers and signs.

There should be separate entrances and exits for vehicles and pedestrians, and vision panels should be installed on doors that open onto vehicle traffic routes.

Where pedestrian and vehicle traffic routes cross, they should be clearly marked using measures such as dropped kerbs, barriers, deterrent paving etc, to help direct pedestrians to the appropriate crossing points.

Traffic routes

The general principles for safe traffic routes are as follows:

- Make sure they are wide enough for the safe movement of the largest vehicle.
- Ensure surfaces are suitable for the vehicles and pedestrians using them, eg firm, even and properly drained. Outdoor traffic routes should be similar to those required for public roads.
- Avoid steep slopes.
- Avoid sharp corners and blind bends.
- Keep them clear of obstructions.
- Make sure they are clearly marked and signposted.
- Keep them properly maintained.

Some parts of a workplace, such as cast-iron columns, storage racking, pipework and cables, are vulnerable to impact from vehicles and will need to be protected.

The law requiring traffic routes to be wide enough for traffic came into effect on 1 January 1993 but the legislation is not retrospective. On this basis, where it is not 'reasonably practicable' to widen traffic routes that existed before this date, traffic management systems and/or parking restrictions should be used if necessary.

What does 'reasonably practicable' mean?
This means balancing the level of risk against the measures needed to control the real risk in terms of money, time or trouble. However, you do not need to take action if it would be grossly disproportionate to the level of risk.

Temporary traffic routes

Temporary workplaces, eg construction and forestry sites, often have routes for vehicles and pedestrians that change as work progresses. Where possible, these routes should comply with the same basic standards as for the permanent traffic routes listed above.

Visibility

Visibility should be good enough for drivers to see hazards, and pedestrians to see vehicles. Adequate visibility for drivers is related to vehicle speed and the distance needed to stop or change direction safely. Consider having mirrors where sharp or blind bends cannot be avoided.

Speed

Reducing vehicle speed is an important part of workplace transport safety. Fixed traffic control measures such as speed humps, chicanes and 'rumble strips' can reduce vehicle speed. It is important to select the most appropriate control as the wrong measure can increase risk by, for example, reducing vehicle stability.

Speed limits can also be used, but they need to be appropriate, properly enforced and, where possible, consistent across the site.

To assess an appropriate speed limit, consider the route layout and its usage. For example, lower speeds will be appropriate where pedestrians are present or where lift trucks and road-going vehicles share a traffic route.

Signs, signals and markings

Signs for drivers and pedestrians in a workplace should be the same as those used on public roads (as shown in the Highway Code[1]), wherever a suitable sign exists.

They should be well positioned and kept clean. Where driving is likely to be carried out in the dark, illuminated or reflective signs should be used.

White road markings should be used to regulate traffic flow, and yellow markings should be used for parking. Wherever possible, such markings should be reflective and maintained regularly.

Lighting

Every workplace should have suitable and sufficient lighting, particularly in areas where:

- vehicles manoeuvre, or pedestrians and vehicles circulate and cross;
- loading and unloading takes place.

Take care to ensure there are no sudden changes in lighting levels which may lead to drivers being dazzled.

Safe site – activity

Reversing

Around a quarter of all deaths involving vehicles at work occur as a result of reversing. It also results in considerable damage to vehicles, equipment and property.

The most effective way of reducing reversing incidents is to remove the need to reverse by, for example, using one-way systems. Where this is not possible, sites should be organised so that reversing is kept to a minimum. Where reversing is necessary, consider the following:

- Install barriers to prevent vehicles entering pedestrian zones.
- Plan and clearly mark designated reversing areas.
- Keep people away from reversing areas and operations.
- Use portable radios or similar communication systems.
- Increase drivers' ability to see pedestrians.
- Install equipment on vehicles to help the driver and pedestrians, eg reversing alarms, flashing beacons and proximity-sensing devices.

Signalling

The job of banksmen (or signallers) is to guide drivers and make sure reversing areas are free of pedestrians. However, in some industries, such as quarrying, banksmen are rarely used due to the size of the vehicles involved.

If you are using banksmen, make sure:

- only trained banksmen are used;
- they are clearly visible to drivers at all times;
- a clear and recognised system is adopted;
- they stand in a safe position throughout the reversing operation.

Parking

Parking areas should be clearly indicated and there should be separate parking areas for commercial and private vehicles. There should also be designated areas where commercial vehicles can be loaded and unloaded.

When vehicles are parked, their parking brakes should always be applied. On most trailers disconnecting the emergency air line does not apply the trailer parking brake.

Drivers should never leave a vehicle unattended without ensuring both the vehicle and the trailer are securely braked, the engine is off and the key to the vehicle has been removed.

Where appropriate, trailer legs should be lowered to the ground.

Coupling and uncoupling

Drivers and those who have overall control of sites (site operators) should make sure that coupling and uncoupling areas are well lit, with firm and level surfaces.

Drivers should be properly trained and have their work monitored by site operators to make sure they follow a safe system of work, involving the use of trailer and tractor unit parking brakes as appropriate.

Further guidance can be found in the Institute of Road Transport Engineers (IRTE) Code of Practice *Coupling or uncoupling and parking of large goods vehicle trailers.*[2]

Loading and unloading

To minimise the risks to those involved in loading and unloading, information should be provided on the nature of the load and how it should be properly loaded, secured and unloaded. This information should accompany the load and be available to those involved in the loading, transportation and unloading activities.

The loading and unloading area should be:

- clear of traffic and people not involved in the activity;
- on level ground;
- segregated from other work areas;
- clear of overhead cables, pipes, or other obstructions;
- protected from bad weather where possible.

Make sure vehicles and trailers have their brakes applied and all stabilisers are in the correct position before loading or unloading.

Throughout loading and unloading there should be a safe place where drivers can wait.

Make sure you take measures to prevent vehicles being driven off during either loading or unloading at loading bays. These can include:

- traffic lights on loading bays;
- vehicle or trailer restraints;
- keeping keys in a safe place, eg with a 'custody' system.

Guidance on how to secure a load safely can be found in the Department for Transport's Code of Practice *The safety of loads on vehicles.*[3]

Tipping

To reduce incidents where vehicles overturn during tipping operations, site operators and drivers should co-operate with each other and make sure:

- tipping is carried out on level ground;
- the tractor unit and trailer of articulated vehicles are aligned;
- wheel stops are used where possible;
- the tailgate is released and secured before tipping;
- no pedestrians are in the tipping area;
- the vehicle is not left unattended and cab doors are closed;
- there are no overhead obstacles, such as power lines.

If loads stick during tipping;

- the vehicle should not be driven to free the load (the body should be lowered and then raised);
- drivers should not climb onto the raised tipper section to free the load.

Mechanical 'vibratory discharge systems' can help to free a stuck load.

Overturning

To minimise vehicle overturns, site operators and drivers should consider:

- vehicle suitability;
- the condition and slope of the surface;
- the operating speed of the vehicle;
- traffic routes that avoid sharp bends;
- the nature and positioning of the load.

Drivers should be monitored to ensure they follow safe systems of work, eg they are wearing seat belts which should be used even if a roll-over protection system (ROPS) is fitted.

Sheeting

To prevent falls from height when sheeting, follow these simple steps:

- avoid the need to work at height wherever possible, ie sheet from the ground;
- where work at height cannot be avoided, use measures such as platforms with barriers to prevent falls;
- if there is still a risk of a worker falling, use personal protective equipment to minimise both the distance and consequences in the event of a fall.

At each step, always consider measures that protect everyone who is at risk (eg barriers) before measures that only protect the individual (eg fall-arrest systems).

The walkways of working platforms should be made of non-slip material. Consult vehicle manufacturers before installing any vehicle-based sheeting system.

Housekeeping

Traffic routes should be free from obstructions and kept clean. Signage should be cleaned and maintained so that it remains visible and effective.

Safe vehicle

Vehicles used in the workplace should be suitable for the purpose for which they are used.

You should carefully consider the working environment in which a specific vehicle will be used and the suitability of that vehicle for the people using it. Consulting with those who will use it is a key part of developing a vehicle specification.

The Road Vehicles (Construction and Use) Regulations 1986 set the standard for the design and construction of vehicles used on public roads. Most vehicles used in the workplace should meet this standard, but in some cases there are specific supply standards for mobile plant (eg some lift trucks).

Warning devices such as rotating beacons and reversing alarms are often fitted, and conspicuous painting and marking can be used to make a vehicle stand out to pedestrians.

Drivers should be able to see clearly around their vehicle, so consider measures such as CCTV and special mirrors where visibility is restricted.

Vehicles should be designed so that, wherever possible, those who use them can do their work from the ground. Where people have to work at height on vehicles, suitable means of safe access onto and around vehicles should be provided.

Maintenance

Vehicles should be maintained in good working order so they remain mechanically sound, and any devices, such as flashing beacons, function properly. Vehicles such as lift trucks and those with tail lifts must be thoroughly examined by a competent person and reports kept.

Planned inspections are a vital part of preventative maintenance. These may include daily safety checks carried out by drivers and regular maintenance inspections based on time or mileage.

Drivers should be provided with a list of the daily checks to be signed off at the start of each shift. This should be monitored to ensure the checks are carried out properly.

Safe driver

Drivers should be competent to operate a vehicle safely and receive appropriate information, instruction and training for the vehicle they use. It is particularly important that younger or less experienced drivers are closely monitored following their training to ensure they work safely.

Competence

Consider the following:

- **For new recruits:** Recruitment and placement procedures should be in place to ensure all new drivers are competent.
- **For existing employees:** Make sure they have, and continue to have, the skills and experience needed to operate a vehicle safely. If the work changes, drivers should receive the necessary training to carry out the modified task safely.

Training

Training requirements will depend on an individual's experience and the training they have previously received. Your risk assessment should help decide the level and amount of training a person requires.

In general, newly recruited drivers have the greatest training needs but there should also be a programme of reassessment for more experienced drivers.

It is important to assess the information provided by newly appointed drivers, particularly in relation to their training and experience. They should also be monitored on-site, to establish both their actual level of competence and any further training needs.

You should keep a training record for each driver. This will help to ensure the most appropriate person is allocated a particular task and identify those requiring refresher training.

There are special requirements for the training of lift truck drivers (see HSE's Approved Code of Practice *Rider-operated lift trucks: Operator training and safe use*).[4]

Fitness to operate

A person's fitness to drive/operate a vehicle should be judged on an individual basis but the aim is to match the requirements of the task with the fitness and abilities of the driver/operator.

Detailed advice on medical standards of fitness to drive is published by the Drivers Medical Unit of the Driver and Vehicle Licensing Authority (DVLA): www.dft.gov.uk/dvla/medical/ataglance.aspx.

Other areas to consider

In addition to the three key areas of site, vehicle and driver, the following areas should also be taken into consideration when managing workplace transport safety.

Consultation with employees

You are legally required to consult all your employees, in good time, on health and safety matters. In workplaces where a trade union is recognised, this will be through union health and safety representatives. In non-unionised workplaces, you can consult either directly or through other elected representatives.

Consultation involves employers not only giving information to employees but also listening to them and taking account of what they say before making health and safety decisions.

Issues you should consult employees on could include:

- health and safety and the work they do;
- how risks are controlled;
- the best ways of providing information and training.

Shared premises

Employers, employees and the self-employed who share a workplace should co-operate and communicate with each other on the site.

Site operators should take responsibility for co-ordinating any health and safety measures and ensuring everyone on-site understands their health and safety responsibilities and the site rules.

Vehicles on which employees of more than one company are at work are considered to be shared workplaces, for example where supermarket employees are loading a trailer owned by a distribution company.

Whenever this occurs, those involved should be fully aware of their roles and responsibilities before any activity is undertaken. Clear, written instructions and information should be available to those involved.

If you do not own the site you should liaise with your landlord as you both have legal responsibilities to ensure the site is safe.

The public

The public often have access to workplaces where vehicles operate. As they will generally be unfamiliar with the workplace, they should be kept away from any work activities wherever possible.

Where this is not possible, you should put in place suitable traffic management arrangements to:

- control pedestrian access;
- separate people from vehicles;
- control vehicle movements;
- monitor activities on-site.

Contractors

Employers and the contractors they use have duties under health and safety law. When using contractors (eg visiting drivers and agency staff), you should:

- take into account their skills, knowledge and experience;
- provide them with relevant information, such as vehicle and pedestrian traffic routes, speed limits, designated loading, unloading and parking areas and site rules. Make sure you consider foreign drivers, eg provide information in other languages;
- liaise with them to consider the risks from each other's work activities and agree how the work will be undertaken;
- monitor them to ensure they work safely and comply with the site rules;
- set up any arrangements for co-operation and co-ordination;
- ensure action is taken when they operate in an unsafe manner.

More information can be found in the HSE leaflet *Use of contractors: A joint responsibility.*[5]

References

1 Driving Standards Agency *The Highway Code* The Stationery Office 2007 ISBN 978 0 11 552814 9 www.gov.uk/highway-code

2 Institute of Road Transport Engineers Code of Practice *Coupling or uncoupling and parking of large goods vehicle trailers* IRTE 2006 www.soe.org.uk/resources/technical-guides

3 Department for Transport *The safety of loads on vehicles: Code of Practice* The Stationery Office 2002 ISBN 978 0 11 552547 6

4 *Lift trucks: Operator training and safe use. Approved Code of Practice and guidance on Regulations* L117 (Third edition) HSE Books 2013 ISBN 978 0 7176 6441 2 www.hse.gov.uk/pubns/books/l117.htm

5 *Use of contractors: A joint responsibility* Leaflet INDG368 HSE Books 2002 www.hse.gov.uk/pubns/indg368.pdf

Further reading

Workplace transport safety: An employers' guide HSG136 (Second edition) HSE Books 2005 ISBN 978 0 7176 6154 1 www.hse.gov.uk/pubns/books/hsg136.htm

Lift-truck training: Advice for employers Leaflet INDG462 HSE Books 2013 www.hse.gov.uk/pubns/indg462.htm

HSE's 'Vehicles at work' website: www.hse.gov.uk/workplacetransport/

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

The Stationery Office publications are available from The Stationery Office, PO Box 29, Norwich NR3 1GN Tel: 0870 600 5522 Fax: 0870 600 5533 email: customer.services@tso.co.uk Website: www.tsoshop.co.uk/ (They are also available from bookshops.) Statutory Instruments can be viewed free of charge at www.legislation.gov.uk/.

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