Speed limits

Workplace transport site safety information sheet WPT23

This information will be useful to anyone who uses workplace transport or who works where it is used. It will help employers, managers and supervisors to assess their workplace and make improvements. The checklists will help you to prepare your risk assessment.

Speed is a major cause of accidents. An increase in speed will cause an increase in the severity and frequency of accidents. Speed limits are essential for controlling traffic around a site and making sure that vehicles travel at safe speeds. They should be appropriate for the vehicles using the site and the loads they carry. Driving surfaces, site layout (including any hazards) and the activities taking place on or near vehicle routes are also major considerations.

The correct use of speed limits can significantly reduce the number and severity of accidents that occur on a site. For example, if someone is hit by a vehicle travelling at 30 mph, they have a one in five chance of being killed. If a speed limit of 20 mph is introduced, their chance of being killed is reduced to one in 40. Providing a correct and safe speed limit will have a significant impact on site safety.

Speed limits should be constant across a site and need to take account of all forward visibility issues and stopping distances. A vehicle travelling at 20 mph needs 12 m to stop – that is 6 m to think and 6 m to brake. If a vehicle's speed increases to 30 mph then 23 m is needed to stop as the braking and thinking distances increase. Remember that large vehicles need a greater distance to stop.

Drivers need to drive within their own competence and should know their vehicle and drive accordingly. Drivers should travel at a speed that will allow them to stop well within the distance they can see to be clear. Enough space should be left between their vehicle and the vehicle in front so that they can pull up safely if it suddenly slows down or stops. The safe rule is never to get closer than the overall stopping distance; allow at least a two second gap from the vehicle in front. The gap should be at least doubled on wet roads and increased further on icy roads.

Common problems

Speed limits are relatively straightforward to set once vehicle speeds on your site are known. The majority of problems occur when trying to enforce speed limits once they are in place.

Incorrect speed limits: Speed limits need to be realistic and should be constant across a site. If they are set too low then people will be encouraged to break them and if they are too high, vehicles will be driven consistently at unsafe speeds. Limits can easily be too high if vehicles have heavy loads or the site has a poor road surface and a hazardous layout.

Speed limit enforcement: Speed limits that are not enforced can lead to drivers exceeding the speed limit on a regular basis and makes the limit meaningless.

Inappropriate measures used to enforce speed limits: Speed limits can be enforced in the wrong way. For example, speed humps in areas used by vehicles that can't go over them safely may damage the vehicle or cause it to tip or overturn (eg fork-lift trucks).

Drivers travelling at excessive or inappropriate speeds: Drivers often exceed speed limits, particularly where they are not well enforced. They may also drive within the limit but too fast for the conditions or the vehicles they are driving. Drivers have responsibility to use their judgement at all times. For example, speeds will need to be slower when a site is wet or exposed to high winds and when a vehicle has a heavy load.

Out-of-date or poor site rules: Problems occur when speed limits are not included in site rules, or where limits may have changed due to changes in site layout and site rules. Additional problems can occur when people using the site are unfamiliar with site rules.

Drivers who don't have the necessary training: Drivers should be familiar with their vehicles and be capable of driving them safely. For specialist vehicles such as fork-lift trucks, drivers are required, by law, to have specific training so that they can handle their vehicle safely. When training is not received, drivers may drive at dangerous speeds and perform dangerous movements.

Checklist – what to look out for

- Incorrect speed limits that have not been set properly.
- Speed limits are not enforced.
- Inappropriate measures used to enforce speed limits.
- Drivers travelling at inappropriate or excessive speeds.
- Out-of-date and/or poor site rules.
- Drivers don't have the necessary training for the vehicles they are driving.

How can you deal with common problems?

Speeding is rarely completely avoided, but many problems can be prevented.

Measure actual speeds on site and decide on a speed limit: 10, 15 or 20 mph may be appropriate for your site. The best way to decide on the appropriate limit is to measure vehicle speeds on your site and to consider:

- the type of vehicles using the site;
- the site layout;
- any hazards that exist on site;
- forward visibility; and
- stopping distances.

To make this assessment you may want to seek professional advice and commission a speed survey or site inspection.

Install appropriate traffic calming measures, eg chicanes: Engineering solutions, such as narrowing the carriageway, provide the best means of enforcing speed limits. Traffic calming measures in particular are a good way to stop vehicles moving too quickly. They could be features that narrow routes such as bollards, raised kerbs and chicanes, or speed humps or 'rumble' devices such as rumble strips, rumble areas or jiggle bars.

Speed humps should only be used on routes where vehicles can go over them safely. Speed cushions may be a safer option as they don't stretch across the whole road. You may need a bypass or separate route for fork-lift trucks and emergency vehicles.

Photo Jackie Stevens

Use signs and markings to inform of speed limits: Drivers need to be aware of speed limits so that they can abide by them. Limits should be clearly signed and, where necessary, supported by markings. Traffic calming features should also be clearly signed, showing the distance to which they extend.

Check and update site rules: It is important that site rules are checked and updated regularly so they remain relevant. Make sure that speed limits are included within the site rules.

Install safety cameras: Safety cameras can be used on larger sites to measure vehicle speeds and to record the identity of vehicles caught speeding. Where this is not possible, you may wish to hire a speed gun to perform spot checks.

Make sure all drivers are aware of speed limits: Speed limits should be effectively communicated to drivers of all vehicles who require access to the site. Speed limits need to be enforced by site security and supervisors to be effective – appropriate disciplinary action should be taken when necessary (ie when the site rules on speed limits are broken).

Checklist

- Install appropriate traffic calming measures, eg chicanes, rumble strips and speed humps.
- Make sure all drivers are aware of speed limits and the consequences for not obeying them.
- Measure actual speeds on site and decide on an appropriate limit.
- Check and update site rules making sure that speed limits are included.
- Install safety cameras to deter speeding.
- Use signs and markings to enforce speed limits.

Checking your site

A site inspection is a quick way of assessing vehicle movements and speeds around your site. It will help you to identify problems such as vehicles consistently travelling

above the speed limit. Think about whether you are able to carry out an inspection yourself or whether it would be more cost effective to bring in a professional.

To carry out a visual site inspection yourself walk around your premises (you may also want to consider driving). Make notes and take photographs of any potential problems, in particular, where speed limits seem to be being broken and where they are not being enforced. Skid marks, for example, are often evidence of speeding. To measure speed of vehicles you will need to hire a speed gun. Mark the problem areas on a site plan.

Consider the following questions when making a site inspection:

- Are speed limits clearly enforced?
- Are there signs that clearly display speed limits?
- Are vehicles speeding?
- Are traffic calming measures in use?
- If traffic calming measures are used, are they the correct ones?
- Are people sticking to the limits?
- Are there any skid marks that indicate excessive speed?

If you require a more detailed and wider-reaching guide see the *Site inspection: Workplace transport checklist* at www.hse.gov.uk/workplacetransport.

Alongside any site inspection you make, it may be appropriate to commission a speed survey. This will help you to accurately identify the speeds vehicles are travelling at and whether the speed limits on your site are appropriate.

It may also be helpful to ask site users for feedback about driving on site and the speed limits that are used. In particular, you may want to find out if they know and use the speed limits that have been set and whether they feel those limits are appropriate.

You should complete a risk assessment relating to vehicle speeds on your site. This will enable you to identify the hazards and their risks associated with vehicle speed on your site. Completing a site inspection may provide a good opportunity to complete a risk assessment. Information on how to complete a risk assessment is in *Five steps to risk assessment*.

Checklist

- Carry out a visual inspection of vehicle movements and speed on your site.
- Pay for a professional site inspection and speed survey if you feel you cannot do this properly yourself.
- Ask site users for feedback about driving on site and the speed limits in use.
- Produce a risk assessment.

Where to get help

If you have a problem with vehicle movements and speed limits on your site, you might be able to fix it yourself. If you are unsure, speak to your health and safety workplace representative or contact HSE for advice. It may be more cost effective to have a professional assess your site and carry out the work.

You can also get advice by speaking to other similar local businesses – look for examples of good practice. Contact your local trade association or Chamber of Commerce for recommended local suppliers or look in the *Yellow Pages* for listings of sign manufacturers and highway contractors.

What might it cost?

- A speed limit or warning sign costs around £200.
- Traffic calming measures vary in price. A single chicane costs around £500–£5000. Their price is dependent upon their size and whether they meet highway standards.
- A speed survey costs around £150–£200 for a day.
- A professional site survey is likely to cost around £2000.

(These costs are a guide and may vary significantly for individual site requirements and circumstances.)

Checklist

- Can you fix the problem yourself or do you need professional help?
- Speak to your health and safety representative and your staff.
- If necessary, consult with HSE about your problem.

Find out more

Workplace transport safety: An employers' guide HSG136 (Second edition) HSE Books 2005 ISBN 978 0 7176 6154 1

Five steps to risk assessment Leaflet INDG163(rev2) HSE Books 2006 (single copy free or priced packs of 10 ISBN 978 0 7176 6189 3) www.hse.gov.uk/pubns/indg163.pdf

Designing for deliveries Freight Transport Association 1998 ISBN 978 0 902991 66 8

DfT, DSA *The Official Highway Code* (Revised 2007 edition) The Stationery Office 2007 ISBN 978 0 11 552814 9

Traffic Signs Manual: Chapter 5: Road markings The Stationery Office 2003 ISBN 978 0 11 552479 0

Traffic Signs Regulations and General Directions 2002 SI 2002/3113 The Stationery Office 2002 ISBN 978 0 11 042942 7

T*raffic advisory leaflet 02/05 – Traffic Calming Bibliography*
DFT www.dft.gov.uk/stellent/groups/
dft_roads/documents/page/dft_roads_037119.pdf

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
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Website: www.tsoshop.co.uk/ (They are also available from bookshops.) Statutory Instruments can be viewed free of charge at www.legislation.gov.uk/.

This document contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This document is available at:
www.hse.gov.uk/pubns/wpt23.pdf.

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