

## ELEMENT 2 – TRANSPORT HAZARDS AND RISK CONTROLS

- 2.1** Explain the hazards and control measures for the safe movement of vehicles in the workplace.
- 2.2** Outline the factors associated with driving at work that increase the risk of an incident and the control measures to reduce work-related driving risks.

### 2.1 SAFE MOVEMENT OF VEHICLES IN THE WORKPLACE

Every year around 70 people are killed in accidents involving vehicles at work. This includes accidents with fork lift trucks, cars, vans and heavy goods vehicles. In addition there are thousands of major injuries. The main types of accidents usually involve people being struck, run over, or falling from vehicles or being struck by objects which have fallen from a vehicle. Many accidents occur when vehicles are reversing. Poor site layout is often a major factor in this type of accident.

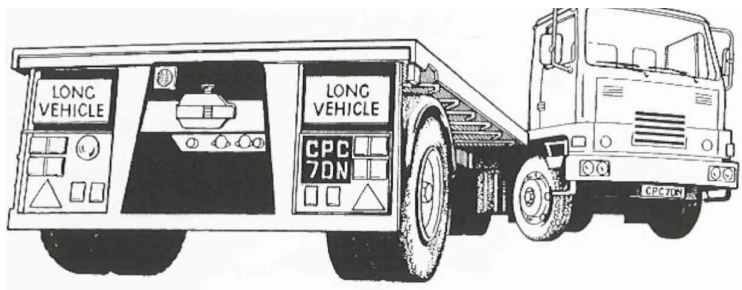
#### Legal responsibilities

Health and Safety at Work etc Act 1974

- Safe place of work
- Safe systems of work
- Safe working environment
- Training etc.

Workplace (Health, Safety & Welfare) Regs 1992

- Traffic routes
- Suitable floor surfaces
- Separate pedestrians and vehicles



Construction (Design and Management) Regs 2007

- Separation of traffic and people on construction sites

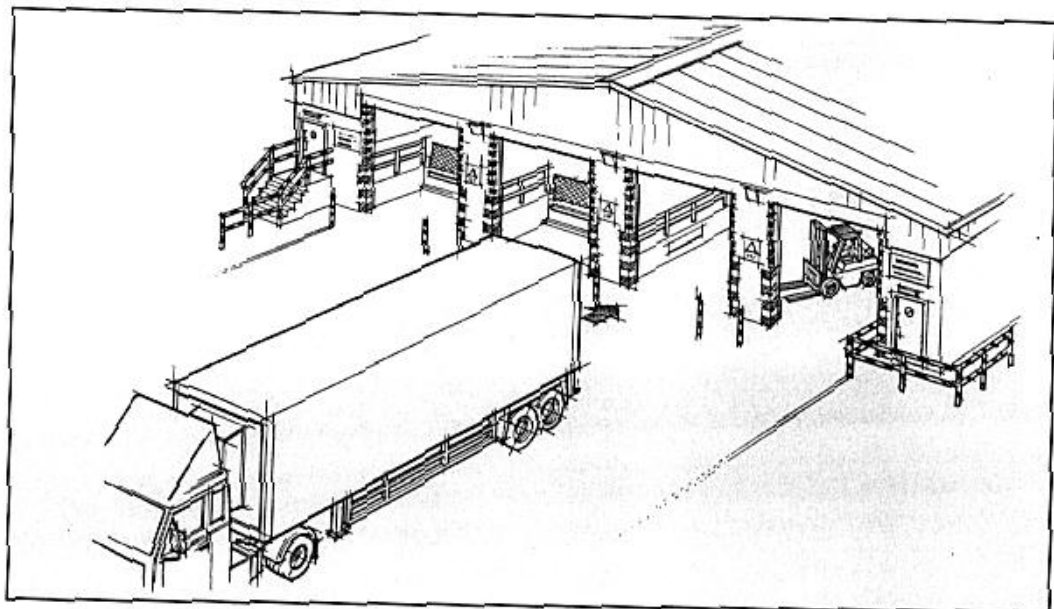
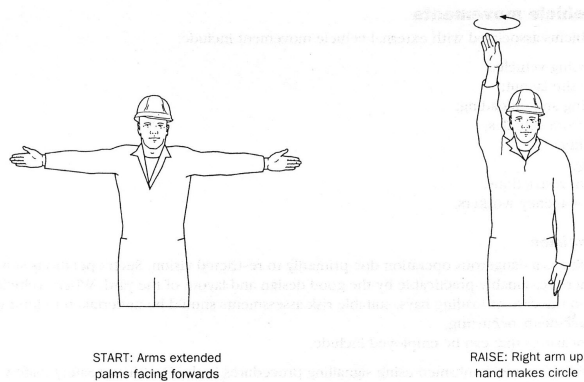
#### 2.1.1 VEHICLE HAZARDS

Vehicle reversing is a dangerous operation due primarily to restricted vision. Such operations should be eliminated where possible. This can often be achieved by improving the lay out and design of the workplace. Can a one way system be used - as this may eliminate the need for reversing and as such eliminates the risk.

Hazards may relate to moving vehicles, reversing vehicles, loading and unloading and even the fuelling of vehicles on site. The hazards may be related to the workplace itself e.g. uneven ground conditions, the vehicles and their conditions e.g. brakes not effective, and the employees who either drive the vehicles or are in the workplace.

## 2.1.2 TRANSPORT CONTROL MEASURES

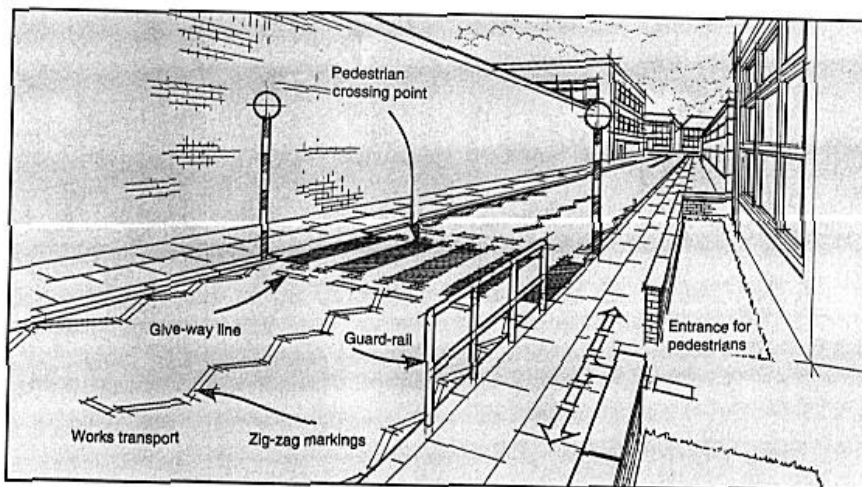
- Providing trained banks men using signalling procedures
- Ensuring that all drivers are aware of the signals used – See example
- Keeping areas clear behind the reversing vehicles
- Refuses to allow people to get out of the way from moving vehicles
- Providing reversing mirrors (large mirrors on vehicles)
- Fixed mirrors on blind corners or bends
- Audible & visual warning devices when reversing
- CCTV in the vehicle cab
- Ensure traffic and pedestrian routes are suitable for use
- Alter site layout to prevent pedestrians and vehicles from mixing – one way routes
- Physically separate traffic routes - barriers
- Provide safe systems of work where segregation is not possible – these must be communicated
- Train and instruct employees on safe working procedures
- Provide information on the layout and procedures to visitors and visiting drivers
- Ensure all drivers are medically fit to undertake driving duties
- Vehicles, whether FLT's or HGV's must be maintained in good working order
- Vehicles and pedestrians should be separated where possible
- Crossing points at suitable locations



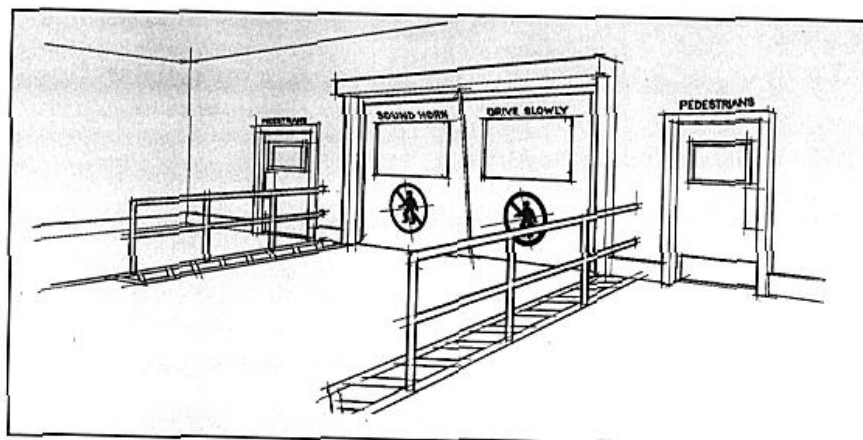
*Typical warehouse vehicle unloading/loading area, showing separate pedestrian access*

- Adequate distances between exit points and vehicle routes
- The provision of refuges and exit points in loading bays
- The provision of separate access points for pedestrians and vehicles
- The provision of warning signs in suitable locations
- The supply of grit for use in snow and ice
- Barriers or clearly defined routes
- Parking areas should be situated well away from traffic and pedestrian flows
- Floor surfaces must be suitable and in good condition
- Adequate levels of lighting should be provided
- Speed restrictions
- Direction and instruction signs should be clear and well-sited
- Ensuring good visibility for drivers and pedestrians
- Set parking areas for staff vehicles and visitors – away from transport areas
- Drive through loading bays to avoid reversing

### Typical workplace transport controls



*Pedestrian crossing point and barrier on two-way vehicle road*



*Separate doors for vehicles and pedestrians*

Pictures taken from Workplace Transport Safety HSG 136 available from HSE Books.

## 2.2 DRIVING AT AND FOR WORK

Driving is the most dangerous work activity that most people do. Research indicates that about 20 people are killed and 250 seriously injured every week in crashes involving someone who was driving for work purposes. Employers may need to complete risk assessments on driving activities especially for those who drive long distances or who drive regularly for work purposes in either their own or a company vehicle.

Risk assessment factors:

- Driver age
- Driving experience
- Accident history
- Health issues
- Type of driving licence
- Vehicle type/size
- Vehicle age
- Typical average mileage

The four main issues to be considered during the risk assessment include the driver themselves, the vehicles they drive, environmental issues and ergonomic issues.

### 2.2.1 DRIVER ISSUES

**All Drivers should:**

- Comply fully with requirements set out in the Highway Code
- Ensure vehicle journeys are planned to minimise road risk factors
- Plan and organise work activities effectively so as not to compromise road risk factors
- Ensure that their vehicle is checked regularly for roadworthiness and is regularly maintained in accordance with manufacturer's recommendations
- Advise their employer immediately of any driving licence endorsements or convictions
- Ensure their vehicle, if more than 3 years old, has a current MOT Certificate;

Drivers using a private car should:

- Ensure their vehicle is suitable for safe business travel
- Ensure their vehicle is suitably insured for business use

### Attitudes to Speeding

#### 84% of people disapprove of speeding yet 69% do it

Only study showed that about 75% of drivers admitted to speeding. Another study highlighted what we really think of our partner's driving- and many of us are scared and angered when they speed. It also reveals that among passengers, over 60% believe that driving too fast increases the chances that their partner will crash. Also;

- 24% have felt angered by their partners' speeding which they think is 'irresponsible and stupid'

- 20% are scared, and concerned that they and the driver could be killed or injured
- 14% are worried about the safety of other road users
- 25% admit to pressing on an imaginary foot brake
- Only 1% wanted their partner to drive faster

#### Speeding Statistics

- You are more likely to kill a pedestrian at 40mph than 30mph
- Specifically, if you hit a pedestrian while driving at 20mph, the pedestrian has a 95% chance of survival
- If you hit an adult pedestrian while driving at 30mph, the survival chance is 80%. But if you hit a pedestrian while driving at 40mph, the pedestrians chances of dying rises to 90%
- Two out of three crashes where people are killed or injured happen on roads where the speed limit is 40mph or less

#### Safe Journey Planning

Drivers need to be aware that how they plan their journeys has a significant effect on driver safety. Safe journey planning aims to ensure that drivers take account of all the aspects of the journey ahead of them.

There are several measures that you should consider when planning a long journey. These are:

- Consider whether the journey is necessary, or whether the telephone, email or video-conferencing could be used instead
- Whether the journey can be taken by an alternative, safer means of transport such as the train
- Not driving for more than 2 hours without taking at least a 15 minute break
- Considering an overnight stop if the journey at the beginning of the day is more than 2 hours, or if required at the end of the day to drive a long distance home when tired
- Ensure the vehicle is checked prior to a long journey (see 'Vehicle Checks')

#### Driver Tiredness

Thousands of crashes are caused by tired drivers, and they are most likely to occur:

- On long journeys on monotonous roads such as motorways
- Between 2am and 6am
- Between 2pm and 6pm, especially after eating or taking an alcoholic drink
- After having less sleep than normal
- After drinking alcohol (also see 'Alcohol')
- If taking medicines that cause drowsiness (also see 'Drugs')
- On journeys home after night shifts

#### Eyesight

Drivers will know that they are required to be able to read a standard number plate with symbols 70.4mm (3inch) high and 57mm wide at a distance of 20.5m (67 feet),

or where a new style number plate is used with characters 50mm wide, at a distance of 20 metres, using correcting lenses if required.

The general recommendation is to have eyesight checked every two years. Having an eyesight test will usually identify the majority of common eyesight conditions, and may also give clues about other less common diseases.

Even at relatively young ages, a range of eyesight conditions may exist which, if identified early enough, can be treated to stop or reduce the effects of long term deterioration.

Glaucoma and Cataract are perhaps the most well known conditions, but diabetes and other age-related diseases, if left unidentified and untreated, are known to affect vision seriously enough to prevent safe road use.

Unfortunately some people who have been prescribed correcting lenses don't use them when they're driving (or riding). This not only puts them at greater risk, it also puts other more vulnerable road users at risk.

## Drugs

Driving under the influence of drugs - whether prescribed medication or illegal substances - is just as dangerous as driving when drunk. It's also against the law. Drugs can affect your mind and body in a variety of ways that mean you aren't able to drive safely. Not only that, the effects can last for hours or even days.

Drugs can affect driving in the following ways:

- Slower reaction times
- Poor concentration
- Sleepiness/fatigue
- Confused thinking
- Distorted perception
- Over confidence, so you take unnecessary risks
- Impaired co-ordination
- Erratic behaviour
- Nausea
- Blurred vision/enlarged pupils
- Aggression
- Panic attacks and paranoia
- Tremors
- Dizziness
- Muscle cramp

## Alcohol

There is no failsafe guide as to how to stay under the legal alcohol limit or how much you can drink and still drive safely. It can depend on many factors such as;

- Weight
- Sex
- Age
- Metabolism
- Stress levels
- Amount of food eaten
- Amount and type of alcohol consumed

Any amount of alcohol affects your ability to drive safely as your reaction times are impaired and you're unable to judge speed and distances accurately. **The only safe option is not to drink if you plan to drive.**

## Drink Driving Facts

If you're convicted of drink driving you'll:

- Lose your licence for at least 12 months (which could mean you lose your job)
- Face a maximum fine of £5,000
- Face up to six months in prison
- Pay up to three times as much for car insurance

### 2.2.2. VEHICLE ISSUES

Modern cars are complex and the condition of various aspects of them contributes to driver safety.

Drivers should ensure that they regularly inspect their vehicle, checking the following things;

- Brake fluid level
- Engine oil level
- Engine coolant level
- Power steering fluid level
- All lights are working
- Tyre pressure, tread depth and general condition
- Windscreen and window visibility
- Windscreen washer fluid level
- Windscreen wipers are working
- Windscreen wiper blade condition

Vehicle checks should especially be undertaken prior to completing a long journey.

## Vehicle Maintenance

Vehicles should be serviced and maintained in accordance with the manufacturer's recommended service interval which is detailed in the vehicle manual.

If your vehicle is over 3 years old it requires an annual MOT test.

## Mobile Phones

Phones in cars can have many benefits. They provide security and help in an emergency. However, they are distracting if used when driving and this increases the risk of a crash. It is hard to do two things at once and to drive safely you must concentrate on the road.

It is illegal to use a hand-held mobile phone when driving, even when you are stopped at traffic lights or in a queue of traffic. This includes making or receiving calls, pictures, text messaging or accessing the internet.

Employees are breaking the law if they pick up or use any type of phone that is, or must be, held to operate it, this may result in a fixed penalty fine or even prosecution. There can also be prosecutions for using a hands-free mobile phone if the employee or driver fails to have proper control over their vehicle. Driving carelessly or dangerously when using any phone and the penalties can include disqualification, a large fine, and up to two years imprisonment.

Even careful drivers can be distracted by a phone call or text message.

- Keep your mobile switched off when driving and use your voicemail, a message service or call diversion so that messages can be left for you when your phone is switched off.
- Only use your mobile after you have stopped in a safe place. Never stop on a hard shoulder of a motorway except in an emergency.
- You may think a hands-free phone will enable you to have control of your vehicle, but your mind will not be fully on your driving. It is not like talking to a passenger who will be aware of what is happening when you are driving.
- Avoid taking calls on a hands-free phone. But if you must, say you are driving and end the conversation quickly. Otherwise you will put yourself and other road users at risk.
- You may use a mobile when driving for help in an emergency. On a motorway it is best to use a roadside emergency telephone, as the emergency services will be able to locate you easily.

## **Tyre Safety**

Good tyres are required to drive safely. They affect the steering, braking and acceleration of your vehicle. Faulty tyres work less efficiently and don't last as long; they could also mean a heavy fine and penalty points.

It's against the law to have;

- Car tyres with thread worn to below 1.6mm;
- A mix of radial and cross ply tyres;
- Over or under-inflated tyres;
- Tyres with cuts, lumps, bulges or tears;
- The wrong sort of tyre fitted to a vehicle or trailer;

All new tyres must meet European standards for load/speed performance, shown by an 'E' or 'e' mark on the sidewall. All retread tyres supplied in the UK must comply with the British Standard AU144E, and be marked with this number. This proves they have been thoroughly tested and meet the same performance standards as new tyres.

Only buy second-hand tyres if they are marked 'part-worn' next to the E or BS mark, to show they have been properly checked for faults.

Most tyres have tread wear indicators, usually six or more small ribs across the bottom of the main tread grooves. When the tread surface is level with these ribs, the tyre needs to be replaced.

## **Seatbelts**

Seat belt wearing in the front seat saves over 2,200 lives every year. Everyone knows they should wear a seat belt in the front seat, but many people still don't realise how dangerous it is not to wear a seat belt in the back. In a crash at 30mph, those unrestrained will hit the front seat, and anyone in it, with a force of between 30 and 60 times their own body weight. This could result in death or serious injury to both the passenger and anyone sitting in the front seat.



The law:

- Seat belts must be worn if fitted. There are very few exceptions to this and the driver is liable to prosecution if a child under 14 years does not wear a seat belt
- Unrestrained children must not be carried in the front seat of any vehicle. Children under three years travelling in the front of any vehicle must be carried in an appropriate child restraint. The adult belt may not be used.
- If an appropriate child restraint or seat belt is available for use in the front, but not in the rear, children between 3 and 11 and under 1.5 height must use the front seat restraint or seat belt.

### **Pregnant women**

The lap strap should go across the hips, fitting comfortably under the bump, while the diagonal strap should be placed between the breasts and around the bump. Like all drivers or passengers, pregnant women must wear a seat belt, unless their doctor certifies that they are medically exempt - there is no automatic exemption. Wearing one may not be comfortable, but it improves safety for both mother and unborn baby.

### **First Aid**

It is advisable to carry a basic first aid kit with you in the vehicle. As a minimum it should contain the following:

- Antiseptic wipes
- Disposable bandage (7.5cm wide)
- Triangular bandages
- Adhesive plasters
- Dressings
- Safety pins
- Sterile eye pads
- A pair of rust-proof blunt end scissors
- Disposable gloves
- Mouth mask for resuscitation

## **2.2.3 ENVIRONMENTAL ISSUES INFLUENCING DRIVING**

### **Winter Driving**

The British winter is unpredictable. Bad weather can strike suddenly so the best advice when severe weather hits is to stay off the road. If you must drive, make sure you are prepared for the conditions.

#### **During wintry weather conditions**

- Ask yourself - is your journey absolutely essential?
- Check the local and national weather forecasts.
- Listen to local and national radio for travel information
- Tell someone at your destination what time you expect to arrive
- Make sure you are equipped with warm clothes, food, boots and a torch. In case of snowy conditions, take a spade.
- Clear your windows and mirrors before you set out and carry a screen scraper and de-icer.

**If you get in trouble**

- Do not use a mobile phone while driving. Stop somewhere safe or ask a passenger to make the call.
- On a motorway, it is best to use a roadside emergency telephone, because the breakdown/emergency services will be able to locate you easily.
- If you have to use a mobile phone, make sure you know your location from the numbers on the marker posts on the side of the hard shoulder.
- Abandoned vehicles can hold up rescue vehicles and snowploughs. To ensure that the road is cleared as quickly as possible, stay with your vehicle until help arrives.
- If you have to leave your vehicle to get help, make sure other drivers can see you.

**Vehicle conditions**

In winter it is even more important to check your vehicle is well maintained and serviced:

- Keep the lights, windows and mirrors clean and free from ice and snow.
- Keep your battery fully charged.
- Add anti-freeze to the radiator and winter additive to the windscreen washer bottles.
- Make sure wipers and lights are in good working order.
- Check that tyres have plenty of tread depth and are maintained at the correct pressure.

**Adjust your driving to the conditions**

- Hail, heavy snow and rain reduce visibility.
- Use dipped headlights and reduce your speed.
- When the roads are icy or slushy it can take ten times longer to stop in icy conditions than on a dry road. Drive slowly, allowing extra room to slow down and stop.
- Use the highest gear possible to avoid wheel spin.
- Manoeuvre gently, avoiding harsh braking and acceleration.
- To brake on ice or snow without locking your wheels, get into a low gear earlier than normal, allow your speed to fall and use the brake pedal gently.
- If you start to skid, ease off the accelerator but do not brake suddenly.
- Watch out for fog - it drifts rapidly and is often patchy.
- In foggy conditions, drive very slowly using dipped headlights.
- Use fog-lights if visibility is seriously reduced, but remember to switch them off when visibility improves.
- Don't hang on the tail - lights of the vehicle in front. This gives you a false sense of security and means you may be driving too close.
- Don't speed up suddenly, even if it seems to be clearing. You can suddenly find yourself back in thick fog.
- Winter sun - dazzle can be dangerous. Keep a pair of sunglasses handy.

**Rain**

In wet weather, stopping distances will be at least double those required for stopping on dry roads, this is because your tyres have less grip on the road.

In wet weather:

- You should keep well back from the vehicle in front. This will increase your ability to see and plan ahead.
- If steering becomes unresponsive, it probably means the water is preventing the tyres from gripping the road. Ease off the accelerator and slow down gradually.
- The rain and spray from vehicles may make it difficult to see and be seen.

### **Flooded roads**

- Don't attempt to cross if the water seems too deep.
- Drive slowly in first gear but keep the engine speed high by slipping the clutch - this will stop you from stalling.
- Avoid the deepest water, usually near the kerb.
- Remember – test your brakes when you are through the flood before you drive at normal speed.

### **Gritting vehicles**

Gritting vehicles travel at speeds of up to 40mph spreading salt across all lanes of the carriageway. Drivers are advised to maintain a safe distance behind them. Do not attempt to overtake.

### **Snow ploughing**

Snow ploughs can throw up irregular amounts of snow that may be a hazard to vehicles. Drivers are advised to maintain a safe distance behind vehicles and not to attempt to overtake.

## **2.2.4 MANAGING WORK - RELATED DRIVING**

Organisations will need to manage risks to their drivers and this may include the provision of a specific procedure or arrangements section within their policy to identify the procedures and systems they aim to implement to manage the risks.

This will include:-

- Policy – driving, use of mobiles, use of personal vehicles
- Health surveillance & eye tests
- Training – for those driving high mileage the provision of advanced driver training may be beneficial
- Check driving licences on a regular basis
- Steps to limit mileage e.g. allowing overnight stays for long journeys
- Maintenance
- AA cover
- Monitoring performance – are there drivers who have been involved in a higher than average number of accidents?
- Investigating incidents
- Clarifying responsibilities – who is responsible for checking oils, tyres etc?
- Legal responsibilities for those using the public roads