Traffic Risk Assessment

Ensuring a Safe Worksite & Building Complex

Every workplace and building complex must be safe for the people and vehicles using it.

- Plan your workplace and building complex so that pedestrians are safe from vehicles, and a one-way system if you can.
- Provide separate routes for pedestrians and vehicles where possible.
- Avoid reversing whenever possible.
- Provide appropriate crossing points where pedestrians and traffic come together.
- Use ‘Highway Code’ signs to indicate vehicle routes, speed limits, pedestrian crossings etc.
- Make sure lighting is adequate where people and vehicles are working.
- Make sure road surfaces are firm and level.
- Make sure there are safe areas for loading and unloading of goods and people.
- Try to provide separate car parking for visitors as they may not know your building complex.
- The following pages are guidelines for the safe movement of traffic and pedestrians around your workplace and building complex.

Separating pedestrians and vehicles

Pedestrians or vehicles must be able to use a traffic route without causing danger to the health or safety of people working near it. Roadways and footpaths should be separate whenever possible, and you need to consider protection for people who work near vehicle routes.

Where possible, traffic routes must also keep vehicle routes far enough away from doors or gates that pedestrians use, or from pedestrian routes that lead on to them, so the safety of pedestrians is not threatened.
Speed

Limiting the speed that vehicles move around the workplace and building complex is an important part of controlling traffic. The best way to do this is to use fixed features that mean drivers cannot move too quickly.

Speed Limits and Speed Limit signage should be in place, however are more difficult to enforce.

Your speed risk assessment should include answers to these questions:

What is the safest speed for vehicles to move around our workplace and building complex?

What can we do to slow down the traffic? How can we set and enforce the speed limits set?

Traffic calming features

Examples of fixed traffic calming measures include: Speed Humps, bollards, “rumble” strips etc

Traffic-calming measures should be signed and clearly visible. Many features can be lit or made reflective. Take care when you are deciding where to use traffic-calming features, because they can sometimes increase risks (for example, by affecting the stability of vehicles or less secure loads).

Speed humps

Speed humps are a proven way to limit the speed that vehicles move around a traffic system. Speed humps within a site should slow vehicles to below 8 kms. Humps are only suitable for routes where vehicles can go over the humps safely. The humps themselves should be clearly marked.

Speed hump warning signs should be clearly visible, and far enough from hump to allow drivers to change speed.
Some vehicles may not be able to go over speed humps safely (for example, most industrial lift trucks or some caravans).

Speed cushions can be used instead of speed humps. Speed cushions are similar to speed humps, but do not stretch across the whole road.

**Speed limits**

Speed limits are used widely, but need to be used sensibly and have to be practical. It is common for sites to set the same speed limit across a whole site, and should be repeated across site. Problems with speed limits are can be if they are poorly signed or they are not appropriate, when they are not enforced, most speedometers do not work effectively at low speeds and some internal site transport vehicles do not have speedometers.

**Signs, signals and road markings**

Install clear signs to tell drivers and pedestrians about the routes, and speeds, they should use.

If signs are used, they should be constructed to Highway Code standards, and are kept clean and visible.

**Lighting**

Every workplace and building complex must have suitable and sufficient lighting.

All access roads, car parks, loading areas, pedestrian areas, and anywhere traffic movements take place, should have suitable and sufficient lighting for safety, and should be kept in good working order, covers kept clean.

**Parking**

As far as possible, keep parked vehicles out of the flow of traffic and people, and clearly indicate where to park.

Try and lay out parking areas to reduce manoeuvring and reversing for large vehicles.
Loading areas

There should be enough space in loading areas for vehicles to move safely and for people to move around.

Anyone not involved in loading or unloading should be kept away from loading areas. Reduce the risk of falling when people have to climb onto a vehicle or trailer by providing well-constructed ladders, non-slip walkways and guard rails where possible.

Your loading areas risk assessment should include answers to these questions:

Where will goods be loaded and unloaded? Who needs to be in the loading/unloading area – and who doesn't?

Is there enough space around the bays for loading and unloading to take place safely? Is the vehicle loading platform the same height as the loading bay platform and could people fall from platforms or bays? What is visibility like for the drivers using the loading bay? Is there an electrical risk associated with loading or unloading?

Protecting structures

Protect the permanent features of your workplace and building complex that could be damaged in a collision.

Your structure risk assessment should include answers to these questions:

What permanent features would be damaged by a collision? How likely it is that a vehicle will hit the feature?

How fast and heavy are the vehicles? At what angle might it hit the feature & what effect of a collision be?

How can we protect the features? What signage and markings can we provide to warn drivers about the features?
Vehicle handling

Workplace and building complexes need to understand a vehicle's size; manoeuvrability; and standard of visibility.

Your vehicle handling risk assessment should include answers to the questions:

How big and manoeuvrable are the vehicle and the load? What is the standard of visibility (forward and mirrors)

Do vehicles need to reverse? As far as possible vehicles should not have to reverse.

Manoeuvrability

Large vehicles, especially articulated and drawbar combinations, often need to perform complicated manoeuvres to turn safely, because the trailers swing out behind the tractive unit. This often involves taking the tractive unit in a larger circle than a car would follow.

If large goods vehicles are using your site, you need to make routes wide enough for them to manoeuvre safely and to pass each other with room to spare wherever possible.

Visibility

Forward visibility needs to be good enough to allow drivers to see and avoid hazards. Visibility is related to:

vehicle speed; the distance the driver needs to avoid hazards – by stopping or changing direction safely;

available light; environmental considerations such as dust or bad weather;

the height of the driver’s eyes from the road; and the general level of visibility from the vehicle.

Vehicles should have large enough windscreens (with wipers where necessary) and external mirrors to provide an all-round field of vision. Drivers should not place objects where they will impede this vision.
Traffic routes

Every traffic route in a workplace and building complex must have a driving surface that is suitable for its purpose.

The surface of any traffic route must not be so uneven, potholed, sloped or slippery that any person could slip, trip or fall. Traffic routes should be maintained to provide good grip for vehicles or people.

Vehicles and loads

As far as possible, vehicles should be segregated from other users of the site during vehicle movement or loading/unloading. Where possible ensure that companies and drivers to your site are aware layout and limitations.

Safe vehicle

Ensure vehicles are suitable and maintained for the purpose for which they are used, particularly the braking system, steering, tyres, lights, mirrors and specific safety systems.

Site-based ways to stop vehicles from moving

You may need to think about ways to prevent drivers from moving stationary vehicles too early – this is known as a 'driveaway' accident. Driveaways can have serious consequences, especially if lift trucks are involved.

Vehicles can also 'creep' away from loading bays as loading machines jolt the vehicle.

Systems to prevent vehicles moving can be built into the design of the vehicle, or be site-based. Relying on vehicle-based methods assumes that the vehicle operators check and maintain them, placing them out of the site operator's direct control.

Systems that rely on people's actions are less reliable than engineered solutions.
Your risk assessment should include answers to these questions:

What is the risk of drivers moving vehicles too early, or of vehicle moving / being jolted by other equipment?

Preventing accidents

A driveaway is when a driver moves a vehicle too early. Vehicles can also creep away from the edge of the loading bay as machines handling the materials jolt the vehicle when they move between the bay platform and the vehicle. This can cause a large gap, or can lead to a ramp suddenly slipping from the vehicle, causing vehicles or people to fall.

Preventing driveaways or vehicle creep is important to protect people working on or around the vehicle. It is also important to reduce the risk of leaks, spillages or falling loads, especially where dangerous loads are being transferred.

Systems to prevent vehicles from moving can either be built into the design of the vehicle or be site based. Site-based measures could include:

- Vehicle or trailer restraints; traffic lights, barriers or other 'stop'-type signals; various systems for controlling access to vehicle keys or the cab; and safe systems of work that make sure the driver is aware of when it is safe to leave.

While vehicle-based methods can be effective, relying on them assumes that the vehicle operators check and maintain them. This places them out of the direct control of the site operator. As a result, site operators often need to take their own precautions.

Systems that rely on people's actions are less reliable than engineered solutions.

Chocks

The simplest way to prevent a vehicle from moving is to place chocks (large wedges of hard material) beneath the wheels. The chocks will resist movement, and should be at least large enough to be noticed by a driver trying to move with them in place. They should also be brightly coloured, to make them visible to drivers and other workers.
Chocks should always be removed when it is time for the vehicle to move away. A safe system of work covering the use of wheel chocks is important, as workers who put them in place or remove them will be in a dangerous place.

Drivers should know not to move until they have been signalled that it is safe to do so by a designated person, who should be sure workers are in a safe place before allowing movement. It may be necessary to halt movements of other vehicles (such as delivery vehicles arriving in adjacent bays) while chocks are being put in place or removed.

**Restraints**

You can use other methods to restrain the vehicle. Some systems clamp to a part of the vehicle, such as the rear under-run bar. However, larger vehicles are often very powerful, and sometimes simply rip restraint devices from their moorings when they begin to move. Other methods are like advanced versions of chocks that are fixed to the floor of the loading bay.

Some methods force drivers to apply the semi-trailer emergency brakes before they can unlock the gate of the dock shelter. These are effective at preventing driveaways, but be careful that you do not encourage drivers to rely on emergency brakes as a way of keeping a semitrailer stationary – parking brakes should also be applied.

**Signals**

Signals such as traffic lights can be effective, although they do not actually prevent a vehicle from moving without and additional barrier or safe system of work.

**Barriers**

A cost-effective way of placing a barrier in front of a vehicle is to arrange a stop sign in a palletised concrete block that is tall enough to be seen from the vehicle cab. Site staff with lifting equipment (for example, a lift truck) can place this in front of the vehicle and then remove it when it is safe for the vehicle to leave. It is important to follow a safe system of work to make sure that anyone moving around in vehicle marshalling areas is safe.
General maintenance

Maintenance policies should also be developed for roadways, footpaths and the infrastructure items such as structures, drainage, lighting, barriers, signs and markings.

Roads, footpaths and surface drainage on site should be adequately maintained. Paved surfaces should be free from pot holes and other surface defects which may affect vehicles and pedestrians.

Spillage clean-up

Adequate facilities and materials should be readily available on-site for clean-up of spillages. Any materials used should not directly affect the road surface. Clean-up operations may extend to the emptying of separators, catch pits and emergency sumps.

Lighting, mirrors and signs

Have a system for carrying out routine checks of lights and mirrors regularly. Replace broken bulbs promptly.

Make sure that the surfaces of lights, bulbs and mirrors are clean and clear of mud.

Make sure that signs can be fully seen, that they are lit and have not been obscured by trees or foliage.

Yard cleaning should be carried out at times when loading bays are not in operation.