

# Health and Safety Design Safety Instruction

## No. 03

<b>Group</b>	Property, Development and Retail Management
<b>Title</b>	People, Cyclists and Vehicle Safety in Design
<b>Date</b>	April 2016

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### Overview

Identifying vulnerable building users and providing adequate facilities within operational buildings is essential to ensure the safety and health of all. This is especially important within areas such as loading bays, service yards and car parks where there are multiple types of users with different requirements. This standard provides guidance to Principal Designers and Designers for any area within the development where cyclists, people and vehicles are using the same space such as service roads, loading bays and car parks.

### Multiple users and the Impact of Space constraints

Often a vehicle swept path analysis is carried out to ensure that vehicles have enough room to move through an area. However, where pedestrians and cyclists also have access, particularly in pedestrianised areas, it is essential that the risks to these vulnerable users are considered.

**On Landsec development projects a Pedestrian Path Analysis must also be completed for all areas where there is a risk of pedestrians, cyclists and vehicle collision through using the same space.** This must consider:

- where people access and egress (access to compactors, bins, post rooms, stores, offices, welfare, locker rooms etc.)
- the quantity of people
- how they will move in an emergency (use of fire escape routes)
- vulnerable groups using the space
- whether shortcuts have been created that could tempt people
- cyclist movement and where they will dismount

In pedestrianised areas it is helpful to analyse the type of vehicle and quantity of vehicles that will need access. Considering these aspects aligns with Breeam credit Hea 06 Safety and Security: To recognise and encourage effective design measures that promote low risk, safe and secure access to and use of the building.



## **Avoiding Reversing and Segregation**

**One way systems to minimise reversing should always be the first choice and these must be marked up with signage.**

**Pedestrian, cyclist and vehicle routes must be segregated physically wherever possible** through separate entrance and exit points and designated pedestrian routes, protected with barriers. **Where this is not practical due to the requirement for pedestrianised areas or space constraints there must be a justification from Principal Designer / Designers.**

Any opportunity to reduce the risk, by providing better visibility or preventing a large flow of uncontrolled numbers through these spaces through positioning planters or street furniture etc. should be taken.

Where cyclists have to share routes these should be segregated from vehicles if possible and separate access cards can be provided to restrict access to certain routes. Cyclist routes into premises should consider the slip resistance of the flooring as cyclists and bikes could bring in rainwater increasing the slip risk. The operational risk of people cycling in corridors must also be taken into account.

Motorcyclist access also needs to be considered and where motor cyclists are in corridors and lifts the levels of extraction required must be identified as the fumes are hazardous.

Vision panels in doors that open onto vehicle movement areas help to allow people to see the risk beyond the door. Once onto a vehicle movement area pedestrian access points must be protected with barriers to prevent someone walking in front of a vehicle. Warning signage should also be displayed to highlight the risk.

Hi Vis mandatory signage should be displayed in all vehicle movement areas and spare Hi Vis should be available on entrance to loading bays to encourage building users to wear it.

## **Speed reduction measures**

Physical measures to reduce or prevent speed build up over long stretches, such as speed humps, can also reduce the risk. Speed restriction signage (5mph) must be displayed at the entrance to loading bays and throughout the vehicle movement space. This must be large enough to be visible from a distance.

## **Automatic Gates**

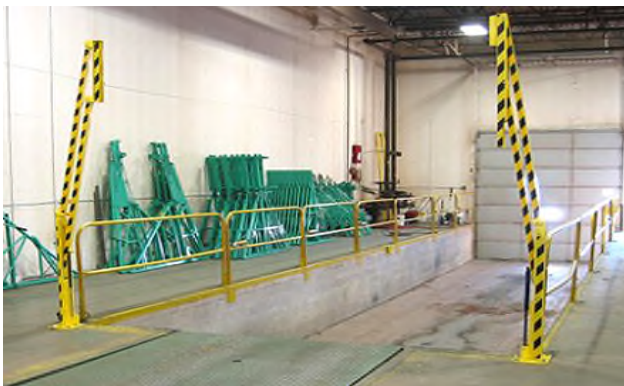
Where gates are required, automatic gates reduce people and vehicle interaction and also decrease manual handling risk. Gate Safe requirements must be considered to ensure there is no trapping risks. Gate Safe have developed guidance (see further help and contacts) that provides help in specifying gates and there is also information for Principal Designers on the different aspects which must be



considered. Landsec require all automatic gates to comply with Gate Safe guidance and be installed by a gate safe installer.

### Preventing Falls

Loading docks **must** have edge protection installed that can be in place when there is no vehicle present. These **must** be easy to operate and keep in place:



Preferred option - Barriers installed provide good fall protection when lowered into position but are often left in an upright position offering no protection.



Chain edge protection is often not replaced and drops down at the centre point providing poor protection.



Step access must be non-slip and have fixed handrails. Edges should be highlighted back from the edge to warn of an unprotected edge if the barrier has not been replaced.

### **Wayfinding**

Space users are often new to the development and therefore may struggle to identify where they have to go. Colour coding cores and way finding signage to goods lifts can significantly help users to navigate these areas.

### **Service Provider Requirements**

Cleaners require water points and power points for cleaning along with storage for cleaning equipment in accessible locations. These should be positioned to avoid any risk from vehicles.

### **Security**

The position of security guards and how they are protected from vehicle movement must be risk assessed as part of the design. They should not be placed where they are at risk from vehicle movement especially around blind corners. Shelter is essential and should be placed where it will be the most effective and allow visibility.

### **Visibility**

Lighting levels must be good enough to ensure excellent visibility and take into account the users of the space. Dark corners must be illuminated and lighting must be positioned to avoid damage from vehicles. Ease of maintenance and access to the lighting is also important. Mirrors on sharp bends if they cannot be avoided can significantly help vehicle drivers and pedestrians. These can be very useful on entrance and exit points where vehicles have to cross pavements.

### **Workplace Wellness and Health**

Loading bays are a workplace for security and other service providers where spare spaces may be used as stores. Air quality and lighting are key factors in providing a healthy workplace. Extraction and air monitoring considering the required air changes per hour is essential.

### **Preventing collisions and building protection**

Fixed objects such as columns or plant should be positioned to minimise them being struck by a vehicle especially if the route is inclined. They should be physically protected from impact or painted a bright colour to highlight them where they do protrude. Height restriction signage should also be displayed. Where there are no loading docks back stops are essential. Fire doors are often damaged as occupiers bring deliveries in the building or move bins out. Fire doors should have hold backs to protect them and



where possible hold open devices are to be installed. For areas above compactors the height required to load and offload should be allowed for.

### **Emergency vehicle access**

Emergency vehicles must be able to access a proportion of the building and have limitations on reversing. The fire brigade provide detailed guidance (Fire Safety Guidance Note GN29) covering their requirements and this must be considered in design.

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**Action to be taken:** implementation 11 April 2016

**Status:** Mandatory

Further help and contacts: If you need any further information or guidance please contact any member of the Health, Safety & Security Team.

- <http://www.hse.gov.uk/workplacetransport/trafficmanagement.htm>
- Workplace Transport Safety: An employer's guide HSG136
- HSE Vehicles at Work website
- Fire Safety Guidance Note GN29
- <http://gate-safe.org/educate/architects/>
- [http://www.breeam.com/BREEAM2011SchemeDocument/Content/05\\_health/hea06.htm](http://www.breeam.com/BREEAM2011SchemeDocument/Content/05_health/hea06.htm)