



Preventing impact damage

Real Estate bulletin

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Introduction

This bulletin focusses on reducing the impact damage caused by vehicles and handling equipment.

Impact damage is an attritional issue, whereby the actual cost of the damage is not usually great, but there will be a vast amount of time taken to deal with the incidents. Frequent incidents can take a significant amount of time to deal with, and incur uninsured costs.

There are also the obvious issues of personal injury and damage to buildings and structures which can lead to them being unusable until they are assessed to be safe. Most impact related incidents can be avoided or prevented.

The following methods can be implemented to reduce the likelihood of impact and reduce the damage caused should it occur. These methods can be used in combination or on their own. There is no one single approach that works for everyone.





1. Impose a site speed limit

Reducing site speed to below 10 mph (15 km/h) can greatly reduce the likelihood of impact damage, as drivers have a greater time to react to potential dangers. The use of speed limit signs with unusual limits such as 8¾ mph can attract more attention and make drivers more aware of the speed limit.

2. Create a one-way system

The introduction of one-way systems reduce the likelihood of vehicle-on-vehicle impact, as well as avoiding 'pinch-points' that can be difficult to navigate from one direction. These 'pinch-points' may include corners of buildings, storage tanks or low walls. Relocating storage tanks should also be considered as a long-term solution.

3. Improve lighting

Improving lighting, either across the entire site or around particular obstacles, can reduce the likelihood of an impact. If lampposts are sited in vulnerable locations, impact protection should be placed around the lamppost.

4. Install impact protection

One of the more obvious solutions to reduce impact damage is the use of protection systems. These include wheel stops, wheel guides, barriers and bollards. The design of the protection system should be appropriate to the vehicles being operated in the area, such as forklift trucks or HGVs. If HGVs are of particular concern then any protection system must be able to withstand the impact of an HGV. Although this may appear obvious it is a common oversight, and choosing the correct protection for the risk is key.

Low level stops can be installed to prevent forklift truck operators 'pushing' items into buildings; these can be used externally and internally to prevent impact. They are also usually brightly coloured to serve as a visual reminder.

Internally barriers can be placed around structural columns to mitigate the damage from accidental impact, from vehicles such as forklift trucks or pallet trucks, for example. Bollards can be installed at the corners of buildings and around doorways to prevent contact with the building.

Wheel stops prevent vehicles (cars or HGVs) from driving into buildings or other items. They will only stop slow-moving vehicles, such as those reversing into bays of parking areas.

Wheel guides are used to keep HGVs and their trailers aligned within the bay whilst reversing.

High curbs can also be used as a barrier, and can protect against most types of vehicle impacts. If pedestrian access is required a step may need to be installed within the curb to allow safe access.





5. Paint items brightly

The easier an item is to see the harder it is to miss, hence a lot of barriers are bright yellow or red.

6. Separate vehicles/machinery from people

Basic principles of health and safety encourage keeping people away from things that could harm them. Make sure there are clearly defined pedestrian walkways (internally and externally). Ensure entry points to buildings or areas within the buildings are not shared. There should be separate and distinct entry points for pedestrians and machines (such as forklift trucks, pump trucks, cars, lorries and vans). A common cause of impact damage is from machinery operators avoiding pedestrians.

7. Internal wall protection

To protect against minor impact damage metal sheeting can be installed on walls, and should be securely fixed without compromising the wall. Timber should not be used for this purpose as this increases the fire loading and spread of fire.

8. Introduce controls on vehicles reversing

If there are areas where reversing could cause major impact damage, consider not allowing vehicles to reverse. In areas where reversing may be difficult but necessary ensure there are dedicated trained staff to help vehicles reverse – commonly known as banksmen or signallers.

9. Deny access

In some instances it may be necessary to deny vehicle access to certain areas of the site or the entire site, whichever is most appropriate.

10. Review layout

The internal and external layout of the site can have an influence on the frequency and severity of impact damage. Tight corners, bottlenecks, obstacles and machinery can all lead to impact incidents. Should incidents occur, the site layout should be reviewed.

11. Improve driver and operator training

Any driver or operator involved in an incident should be interviewed to ascertain the cause. If necessary the driver/operator should be trained or retrained. If there are multiple incidents with different drivers there may be a problem with the driver training programme or the tasks being asked of them.

12. Prominent CCTV coverage

Placing CCTV in prominent positions can help prevent or help identify the cause of repeat incidents.





13. Over-height vehicle protection

High vehicles impacting with low objects, such as buildings and lights can be an issue and there are several methods of prevent impacts in these situations:

- Highly visible signage displaying the maximum clearance under the obstacle.
- Vehicle height restriction barriers: brightly coloured horizontal or vertical bars that hang some distance from the obstacle. These are most suited to vans as they will see and hear the bar making contact.
- Over-height vehicle detection – when an over-height vehicle passes the detector either a red light or stop sign is displayed to alert the driver.

14. Operator training

Prior to allowing any person to operate machinery with the potential to cause impact damage (such as forklift trucks, manual handling equipment, shunters and carts) full training should be provided. This should include theoretical training and practical hands-on training that is appropriate to the operator.



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