



The Importance of Safely Segregating Pedestrians in the Workplace from Moving Material Handling Equipment

Each year, the UK Material Handling Association uses National Forklift Safety Day (NFSD) to raise standards across the material handling sector and beyond. In 2020, its campaign focused on the importance of safely segregating people from material handling equipment.

In its campaign eBook, Segregating People from Materials Handling Equipment¹, the association concluded the vast majority of fatalities and serious injuries caused by an impact with moving material handling equipment were wholly avoidable by adopting simple measures including traffic route demarcation and the installation of physical safety barriers.

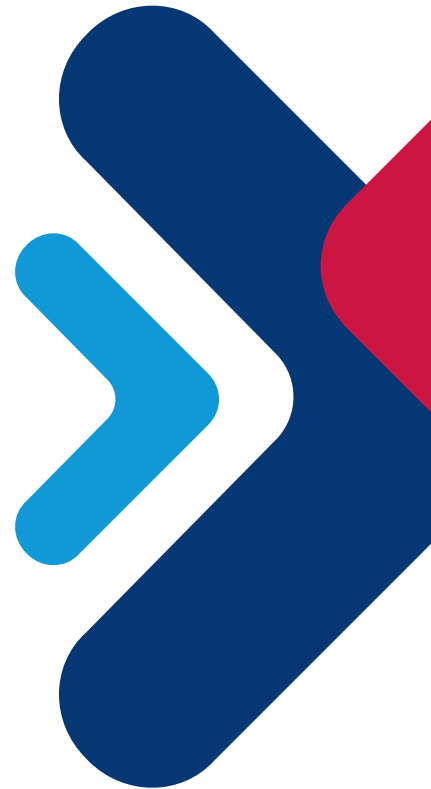
The simple advice offered then remains relevant today:

- Assess the risks and safely manage worksite traffic
- Keep pedestrians and moving equipment apart
- Physical barriers are better than safety distances
- Where possible, utilise assistance systems

The 2024 NFSD campaign has focused on what to do in the event of an incident/accident involving material handling equipment and the best way to mitigate such incidents is to try and prevent them happening in the first place.

According to the PAS 13 document produced by the British Standards Institution², health and safety statistics reveal that approximately 50 people are killed each year and more than 5,000 injured in accidents involving workplace transport.

Workplaces such as warehouses, factories and construction sites where moving equipment is in constant use can be inherently dangerous. Measures to mitigate risk are vital to reduce accidents, if not prevent them altogether.



¹ NFSD: Segregating People from Materials Handling Equipment – www.nationalforkliftsafetyday.co.uk

² Publicly Available Specification: Code of Practice for Safety Barriers in Traffic Management within Workplace Environments With Test Methods for Safety Barrier Impact Resilience; British Standards Institution, 2016



However, this is a no one-size-fits-all situation and as PAS 13 states “each workplace is unique and likely to present different hazards and risks”. Safety officers must ensure there is a purpose-designed and robust workplace safety management system in operation at all times and that the proper segregation of material handling and other moving vehicles and people is in place, understood by all those working at or visiting the site and adhered to at all times.

Picking up from NFSD, the PAS document concludes “the most effective way of ensuring pedestrians and vehicles move safely around a workplace is to provide separate pedestrian and vehicle traffic routes and, where necessary, implement barriers, rails and signage to prevent pedestrians crossing at dangerous places and to direct them to safer crossing points”.

Safe segregation can only be effective providing all site-specific variables have been assessed and the risks understood. In the case of warehouses, where moving material handling equipment is a constant factor, the guidance from the Health & Safety Executive (HSE) states: “Warehouses should be designed and laid out to allow for the safe movement of goods, materials and people. Good design and layout can help reduce accidents, including those involving vehicles and people slipping and tripping”.³

Safety rules to help prevent accidents should ensure a safe system of traffic management, including methods and procedures for arrival, reception, unloading, loading and movement of vehicles within the workplace should be enforced.

PAS 13 states the best ways to mitigate risk are to apply the following:

- Separate pedestrian activities from areas where vehicles are operating, where reasonably practical
- Define, designate and clearly mark pedestrian routes and crossing place
- The use of protective barriers and traffic management procedures to control the movement of vehicles and pedestrians (PAS 13 outlines the current good practice traffic management procedures for a workplace and provides a standard for the safety barriers within them)





Factors to consider when deciding what steps to take include:

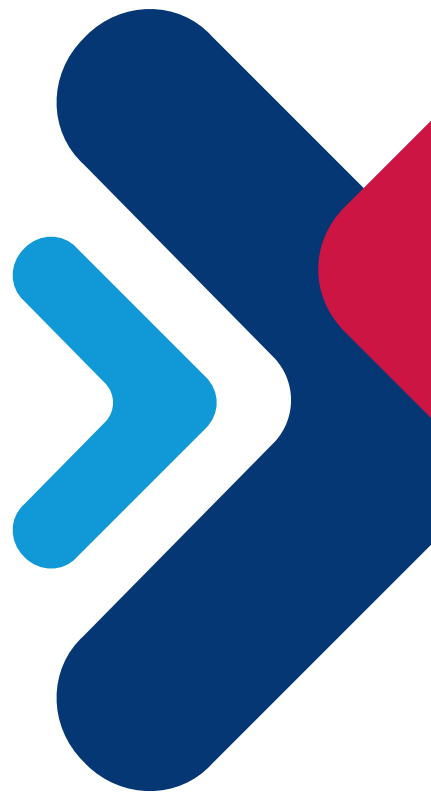
- What type of protection or safety barriers are best-suited to this site
- When is a vehicle barrier, pedestrian barrier or white line used?
- Is the current protection or safety barrier fit for purpose?

PAS 13 provides greater context for these recommendations along with advice on the best design for a specific work environment. The guidance also covers how to calculate the impact kinetic energy of vehicles in a workplace so the best barrier for the site can be determined. It also offers information on testing the force impact of safety barriers.

The first step should be to prepare a floorplan of the site. This should include:

- Pedestrian routes and walkways
- Pedestrian zones and work areas
- Vehicle routes
- Pedestrian crossing points
- Critical structures and equipment
- Vehicle parking areas; and
- Loading and unloading zones

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In addition, administrative controls such as signage and no-go areas should help to improve safety for all pedestrians and equipment operators. The use of Personal Protective Equipment (PPE) such as high-visibility clothing should be mandatory. Training on the measures introduced should also be provided for all workers, both pedestrians and equipment operators.

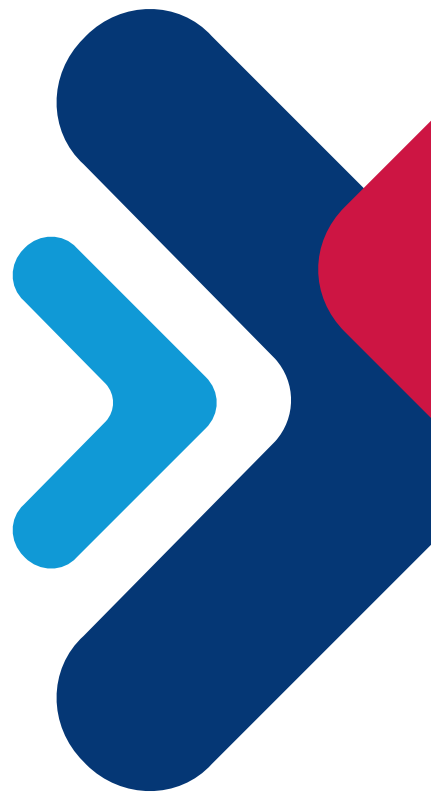
To monitor the effectiveness of any measures introduced, regular reviews of all protocols should be carried out by qualified staff. These should include any changes to the layout of the workplace environment, perhaps brought about by the installation or use of new equipment. It should also assess whether the measures are being correctly followed and whether they have generated any problems during the assessment period that need to be addressed.

Aside from fault-finding, the review should also identify where improvements to the health and safety of workers have had a positive effect, such as fewer accidents. This information should be relayed to the workforce so they can see the control measures are having a positive effect.

Safety Barrier Design

PAS 13 also outlines what to look out for when assessing what safety barrier suits which type of workplace.

It states that barriers should be tested to a performance rating using a dynamic test method. The test should be overseen by an accredited body and it should be manufactured using established methods and within a factory production quality control system.





The barriers should be installed at a height where the lift truck can be contained and not over-ridden. Ground level barriers should also be tested using similar methods and finished with a permanent highly visible colour. Various colour schemes are available to signify levels of danger.

“ Choosing the right safety barrier for your workplace is vital for segregating pedestrians from moving equipment. When assessing the various options, safety managers should always refer to PAS 13: 2016. This is the accepted code of practice for safety barriers used in traffic management within workplace environments. ”

David Goss,
UKMHA
Technical Director

“Used effectively and paired with a proper risk assessment, the code of practice is intended to prevent serious accidents in the workplace involving moving material handling equipment. In addition to the PAS 13 guidance, the UKMHA’s Segregating People from Material Handling Equipment is also an invaluable resource.”

For more information on National Forklift Safety Day.

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