



## **Time to act now:**

# Hostile Vehicle Mitigation and the responsibilities facing event organisers

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# Foreword

**At Hardstaff Barriers a trading division of Hill and Smith Infrastructure, we believe that nothing is more important than protecting human life. We are passionate about keeping people safe from harm in public places.**

Anyone who attends an event - from a small gathering to a sports game attended by thousands of spectators - has the right to be safe and protected.

We firmly believe in our 'For the Love of Lives' brand promise, and as a result, Hardstaff Barriers has been the appointed contractor of the Government's National Barrier Asset - a large collection of hostile vehicle mitigation (HVM) products - for a number of years.

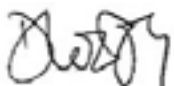
We're very proud of this important role and only employ the very best industry professionals to be part of our HVM team. Hardstaff Barriers HVM/Security division is headed up by Niall Griffin, who joined us in 2018, following a 32-year career with Sussex Police, and has been involved with the NBA since its inception in 2004.

Niall is one of just 259 Chartered Security Professionals on the Register in the UK, making him one of the most knowledgeable and qualified specialists working in the HVM industry.

He contributed heavily to this White Paper and is genuinely passionate about event security and public safety.

Events and entertainment are an important part of our lives, both culturally and socially. We all have the right to be safe in public places, without feeling worried or at risk.

We hope that people working in the events industry find this document a useful source of information. And as a result, these people feel better prepared and informed about their responsibilities.



**Dave Todd**

Managing Director -Services  
HILL & SMITH INFRASTRUCTURE



## Hardstaff Barriers - HVM/Security Division

Hostile Vehicle Mitigation is ingrained within Hardstaff Barriers. Over the last 15 years, we have delivered solutions ranging from small single gate installations to large state events requiring a full secure island site.

Hardstaff Barriers, a leading provider of highway safety barriers, is part of Hill and Smith Infrastructure, a business group also consisting of Asset VRS, Hill & Smith Barriers and Varley and Gulliver.

# Executive summary

The aim of this white paper is to inform event organisers of their responsibilities to keep their employees, volunteers and members of the public safe.

They have a duty to ensure, so far as reasonably practicable, the health, safety, and welfare of these individuals and that they are not exposed to risks to their health and safety arising from the operation of the event.

It also highlights the importance of seeking expert advice when identifying appropriate Hostile Vehicle Mitigation solutions, and explains the range of different products available and their purpose.

The underlying message throughout this document is the importance of planning ahead and taking proactive steps to keep people safe, rather than wait until imminent laws are in place.

This proactivity will not only protect people's lives, but it will also protect the reputation of an event and the organisations behind it.

Organisers are urged to act now, as part of the corporate social responsibility, to assess their current processes and procedures - and ensure that they are operating over and above the current legal requirements to ensure public safety.

This paper explains how event organisers can do this assessment, in a straightforward way, and the range of expert help and support available to them.

# Introduction

**The requirement for temporary or permanent protection for assets from vehicles is nothing new. Since the inception of vehicles, incidents have occurred.**

Sadly, these have accounted for numerous human casualties and mass damage to property. Some incidents were accidental in nature and others, regrettably, were deliberate acts, undertaken by disaffected individuals, groups or terrorists.

Hardstaff Barriers has a long history of providing protection in the highways sector. This includes temporary and permanent vehicle restraint systems; some designed to prevent errant vehicles from entering working areas during maintenance and construction and others designed to protect road users.

In the last two decades, drawing on this long-standing experience of protecting road users and highways workers, the company also began manufacturing and installing barriers, designed specifically for Hostile Vehicle Mitigation (HVM).

These barriers began being widely used to protect people and property from the threat of errant vehicles in a wide variety of public places, such as music venues, Christmas markets, sports grounds and government buildings.

## The origins of HVM

HVM is a term borne out from the Irish Republican Army's (IRA) bombing campaign on the mainland in the 1980s. The bombing by the IRA of the Grand Hotel in Brighton, during the government of the day's party-political conference, was a terrorist attack on a government using explosives - a recurring theme through history.

Early HVM was about creating 'Stand Off' by placing barriers, which would not only prevent the attack vehicle reaching the target building, or people, but also being able to withstand explosion, without adding to the effectiveness of the bomb by becoming projectiles.

The next game-changer was using vehicles as weapons; first seen in April 2009, when a Dutch national drove his car into a public parade for the Dutch Royal Family. His attack, while deliberate, appeared to have been as a result of mental health issues and not directly related to terrorism.

Nonetheless, his actions claimed the lives of seven innocent victims and he himself died from injuries sustained. It should be noted that he utilised a small hatchback car; not a 2.5 tonne pickup truck or a 7.5 tonne box van.

## Not all acts are intentional

But members of the public are not only at risk from deliberate vehicle as weapon attacks. Many collisions have occurred in public places worldwide that were not caused by deliberate acts.

One unforgettable incident happened in Glasgow City Centre just before Christmas in 2014.

As shoppers and tourists enjoyed the festivities, an out-of-control bin lorry collided with the crowds, killing six people and injuring 15.



# 1. Doing the right thing

## 1.1 Corporate Social Responsibility

Corporate Social Responsibility (CSR) implies that organisations should act in a way that enhances society. Most organisations recognise that there must be accountability when things go wrong as a direct result of their action, or inaction.

Existing legislation, through the [Health & Safety at Work Act \(HASWA\)](#) and the [Management of Health and Safety at Work Regulations](#), provide a legislative framework designed to keep people safe at work, or whilst attending a place of work. This is quite encompassing as most events are somebody's place of work.

But what about the duty to protect members of the public, who are being exposed to risk by visiting the event? They have a right to be safe. Event organisers have a duty to protect them throughout their experience, and this duty starts before they even enter your venue.

In recent years, the All England Lawn Tennis Club has made a number of proactive steps to increase protection for fans visiting the Wimbledon Championships.

HVM barriers are now routinely installed outside the venue as part of "enhanced measures" to provide "visible physical security" at the event.

Tournament organisers say there has been a "proportional uplift" in measures introduced in past years.

## 1.2 The Protect Duty

There is currently no legislative requirement for organisations or venues to consider or employ security measures at the vast majority of public places.

The [Protect Duty](#) is new legislation announced by the Prime Minister in December 2022.

It was first announced by the security minister in February 2020 and the draft bill has yet to start the legislative process.

Protect Duty will improve the safety of venues and publicly accessible spaces and will see people better protected against terrorist attacks.

Also known as Martyn's Law, it was established in honour of Martyn Hett, one of the 22 victims tragically killed in a terrorist attack at the Manchester Arena in May 2017.

More than 800 other people received physical or psychological injuries in the explosion, which occurred after an Ariana Grande concert.

## 1.3 Protect Duty proposes five key requirements:

1. A requirement that spaces and places to which the public have access engage with freely available counterterrorism advice and training.
2. A requirement for those places to conduct vulnerability assessments of their operating places and spaces.
3. A requirement for those places to have a mitigation plan for the risks created by the vulnerabilities.
4. A requirement for those places to have a counterterrorism plan.
5. A requirement for local authorities to plan for the threat of terrorism.

## 1.4 The Manchester Arena Inquiry

During the Manchester Arena Inquiry Volume 1 (MAI), the Chairman, the Hon Sir John Saunders, made the Protect Duty one of his monitored recommendations (MR4).

He made the following key observations:

- 'I recommend that an adequate and effective enforcement process is established in relation to the Protect Duty.'
- 'In my view, there is no good reason to put in place an enforcement regime that is any less rigorous or robust in terms of inspection, enforcement, and penalty than that which exists in the parallel health and safety legislation. Given what is at stake, namely the lives of people going about their everyday business, there is every reason to make the Protect Duty equally rigorous



and robust’.

## 1.5 The need for enforcement

As Sir John Saunders concluded, an adequate system must be established to inspect and enforce Protect Duty upon its introduction, along with suitable penalties for those who breach it.

The MAI also refers to the need for a Competent Person Scheme (CPS) to assist businesses with a ‘Protect Plan’, which will be a key element of the Protect Duty requirement.

This is to ensure the security industry cannot develop unregulated training schemes for the Protect Duty and offer qualifications, which have not been sanctioned. This is the first step towards compliance with the new Act when it becomes law.

The inspection and enforcement regime will then have a baseline to inspect against. It is recognised that any application of the protect duty should not be onerous for those who are required to comply, ‘reasonably practicable’ will feature as it does in numerous Acts of Parliament.

There will always be a residual risk from any mitigation measure; that risk must be managed and the protect plan will need to evidence that management.

## 1.6 A moral duty, whatever the event type or size

Ensuring the safety of employees and members of the public is not just a concern for organisers of large events.

It was stated in the government’s Protect Duty public consultation: ‘Terrorist attacks can potentially occur anywhere, in large or small venues, at a range of locations.’

It went on to describe publicly accessible locations as ‘any place to which the public or any section of the public has access, on payment or otherwise, as of right or by virtue of express or implied permission.’

## 1.7 Time to act now

What is clear is that we do not need to wait for the Protect Duty to become law before acting. We already have legislation and guidance, which should be sufficient for event organisers to act now to ensure the safety of those working or attending their event in any publicly accessible space.

The Protect Duty will be unable to function without the inspection and enforcement regime detailed in the MAI, and this may be its biggest hurdle prior to enactment.

People attending an event would not be at that location, or in the ‘grey space’ (the area immediately outside of

the event area), if it was not for the event taking place. Therefore, the organisers of that event have a moral duty to ensure the safety of all those attending. Action should be taken immediately, and event organisers should not wait for additional legislation before acting.

## 1.8 The Purple Guide

[The Purple Guide](#) for event organisers aims to help those who organise music or similar events, so that the events can run safely.

Written by [The Events Industry Forum](#) in consultation with the events industry, the aim of the guide is to help those event organisers who are duty holders to manage health and safety, particularly at large-scale music and similar events.

It clarifies that organisers have a duty to ensure, so far as reasonably practicable, the health, safety, and welfare of their employees.

They also have a duty to ensure, so far as is reasonably practicable, that others – including volunteers and spectators – are not exposed to risks to their health and safety arising from the operation of the event.

This guide goes beyond the compliance with the Health and Safety at Work Act and covers not only legislation and good practice for Health and Safety, but other legislation and good practice across the industry including the Licensing Act 2003 and the Civil Contingencies Act 2004 the Regulatory Reform (Fire Safety) Order 2005.

The contents are not designed to be prescriptive but



### The Purple Guide - Counter Terrorism Chapter

The chapter provides guidance to event organizers and users in the UK on how to make their events safer and less attractive to terrorists. It emphasizes the need for thorough security risk assessment, competent advisors on counter-terrorism, and integrated planning and management of safety, security, and services.

[Visit the full chapter here](#)

## 2. Being aware of the residual risks

### 2.1 Optimistic Bias

Research by psychologists over the years has shown that humans generally possess an ‘optimistic bias.’ It is commonly defined as the mistaken belief that one’s chances of experiencing a negative event are lower than that of others.

More often than not, people believe ‘it won’t happen to me.’ Nobody directly involved in a terrorist or accidental incident ever expected it to happen. But clearly, these incidents do happen and they have to affect somebody.

The Civil Contingencies Act requires local resilience forums and emergency responders to exercise their response to terrorist attacks and/or major incidents.

Many large venues will have undertaken Project Argus Counter Terrorist training provided through the [National Counter Terrorism Security Office](#) (NaCTSO).

Despite these preparedness measures, history tells us that when incidents or attacks occur, those responsible for initial, and subsequent response, can be found lacking.

### 2.2 Seek expert advice

Counter terror advice is available through the [Counter Terror Security Advisor](#) (CTSA) network, which is overseen by NaCTSO. If a venue or event does not meet their threshold for engagement (they have limited resources), then it is important to engage the services of an independent Counter Terrorist Risk Manager (CTRM).

Due diligence is required to ensure the CTRM is qualified to provide the advice. [The Security Institute or Register of Chartered Security Professionals](#) is a good starting point.

The CTSA or CTRM should undertake a site-specific threat and risk assessment and undertake a vulnerability assessment looking at preventative measures currently in place.

A CTSA or CTRM who understands and can interpret a vehicle dynamic assessment (VDA), should be able to advise on an appropriate measure, which has been tested to an applicable standard for the user’s operational requirement.

It is important to understand that there are different testing regimes for the available products in the marketplace; one size does not fit all.

They can then advise on proportionate, additional measures to assist with minimising, mitigating, and managing the residual risk to an acceptable level.



### 2.3 The use of hostile vehicle mitigation barriers

Hostile vehicle mitigation barriers (HVM) can form part of a suite of measures deployed to keep people safe by developing a layered approach to security. HVM has been developed over recent years to be lighter in weight and therefore easier to deploy, without the need for heavy plant.

Before deploying HVM, it is important to consider the residual risk to be protected against, together with the operational requirements that need to be achieved.

These operational requirements are the major consideration. For example, we could specify measures which prevent a hostile attack, but do not allow vehicle or pedestrian access to the venue.

The operational requirements, together with a vehicle dynamic assessment (VDA), allow the appropriate measures to be identified.

A VDA consists of a specialist reviewing the existing or proposed road layout together with the perceived threat to calculate the maximum possible penetrative speed of a hostile vehicle at the target.



## 2.4 HVM product innovation

The requirement for protection from vehicles has seen innovation in recent years. The heavy barriers seen in the government secure zone and used for major events, have been supplemented with lightweight temporary moveable barriers, which can immobilise a vehicle in the event of an attack.



## 2.5 Which type of HVM barrier should I use?

When selecting an HVM solution, it is essential to seek the expert advice of an industry specialist.

This expert can advise on the most appropriate HVM solution, based on the specific needs of the event and the likely risks.

This is done by considering the operational requirements, the threat, VDA, vulnerability assessment and residual risk, before offering potential solutions to minimise, mitigate and manage the risk.

The following examples illustrate the types of HVM products available and their purpose:

- Portable, lightweight and movable HVM barriers - Often used at open air events to limit the potential of hostile or errant vehicles interacting with pedestrians or event attendees.
- Heavy surface-mounted vehicle gates, pedestrian portals or access points - Often used where protection from vehicles is required and where legitimate access for delivery or emergency response is still required.
- Linear HVM barriers - Often utilised to prevent the vehicle pedestrian interaction, where queues form adjacent to live traffic flow, for instance.

## 2.6 The importance of HVM barrier standards

HVM products are rated under a variety of standards - PAS68, IWA 14.1, CPNI Vehicle Attack Delay Standard (VADS), DEKRA and ASTM being the main ones.

In the UK, the relevant standards are PAS68, IWA 14.1 or CPNI VADS. The former two relate to high energy impacts from various sized vehicles at various speeds. The vehicle attack delay standards refer to slow speed incursions and must provide a minimum of 30 seconds' delay from any hostile vehicle breaking through.



## 3. The importance of being proactive

- The vulnerability assessment will look at the human element of the security provided; this is often the weakest link in any layered security scheme.

### 3.1 Invest in training

NaCTSO provides a number of E-learning modules, which are all available on the [Protect UK website](#).

There are several training packages available to assist venues to improve the knowledge of their managers, stewards, and security operatives.

These cover both preventive measures such as, Hostile Reconnaissance, Action Counters Terrorism and the 'Run Hide Tell' principles to undertake during an attack.

Every member of the event team, responsible for managing the event, should be properly trained to handle situations if they do go wrong. These individuals have a huge responsibility in the event of an incident, and they should be properly equipped to respond.

### 3.2 Operational Requirements are vital

Operational Requirements (OR) are an essential tool to enable an organisation to produce a clear, considered and high-level statement of their security needs based on the risks they face.

Preparing an OR and understanding the threats applicable to a venue, which can and do change, depending on the event participant and attending audience, is the key step to building a security plan.

Event organisers must have a response plan covering all eventualities:

- Staff responsible for delivering that plan must exercise and understand their role and responsibilities should they need to enact it.
- Stewards must be trained and recompensed appropriately for the role we hope they will never have to undertake.

### 3.3 Protecting your reputation

Reputational risk cannot be ignored. Once an establishment or organisation has lost its reputation it will be extremely difficult to restore it.

Demonstrating commitment to HVM and public protection by adopting the principles of Protect Duty now, rather than waiting for the law to be imposed, will undoubtedly enhance an organisation's reputation.

Investing in professional threat and risk assessment, writing a response plan, training, and exercising the staff expected to deliver that plan are not major expenses for organisations.

By taking the necessary steps to protect employees and the public, organisations may also notice that their insurance premiums are reduced by undertaking appropriate assessment, planning and exercising.



# Conclusion

This white paper urges event organisers, above all, to be proactive and diligent in their approach to the safety of their employees, volunteers and members of the public.

It urges those with a duty of responsibility to read this document fully and seek further expert advice when assessing its current processes and procedures, in order to determine the HVM solutions required.

**At a glance, the white paper recommends that event organisers should ensure the following steps have been followed:**

1. Be proactive and prepared - make improvement now - do not wait until the Protect Duty takes effect
2. Be clear on the risks facing the event and the staff and visitors associated with it
3. Consult all of the advice available on the issues - in particular [The Purple Guide](#) and the [Manchester Arena Inquiry](#)
4. Invest in training to ensure that staff and/or volunteers are adequately prepared in the event of an incident
5. Be aware of the range of HVM products available. Hardstaff's range of products can be found [here](#)
6. Seek expert advice when assessing risk, planning security measures and selecting HVM products
7. Think of the bigger picture now, in order to protect people and the reputation of the event and organisations behind it. More information can be found on [the protect UK website](#)



GLOSSARY		
Acronym	Full Meaning	Definition
<b>ASTM</b>	American Standard Test Method	American high energy impact tests for <a href="#">HVM</a>
<b>CPNI</b>	Centre for the Protection of the National Infrastructure	The Public face of MI5, the security service <a href="#">CPNI</a>
<b>CPS</b>	Competent Person Scheme	A scheme currently being scoped by NaCTSO to ensure those offering protective security advice are <a href="#">competent</a> to do so
<b>CSyP</b>	Chartered Security Professional	A <a href="#">Register</a> of Security Professionals who have achieved Chartered Status
<b>CT</b>	Counter Terrorist	Expression for countering terrorism
<b>CTRM</b>	Counter Terrorist Risk Manager	Civilian Trained CT risk managers <a href="#">CTRM</a>
<b>CTSA</b>	Counter Terrorist Security Adviser	Specialist advisers from <a href="#">NaCTSO</a>
<b>DEKRA</b>	German Test House for impact testing HVM	<a href="https://www.dekra.de/de/startseite/">https://www.dekra.de/de/startseite/</a>
<b>HASWA</b>	Health & Safety at Work Act 1974	<a href="#">Legislation</a> covering health and safety at work and in the workplace
<b>HVM</b>	Hostile Vehicle Mitigation	A range of solutions to protect assets from <a href="#">hostile</a> or errant vehicles
<b>IWA 14.1</b>	International Workshop Agreement	This is the international <a href="#">standard</a> for high energy impact testing of HVM
<b>MAI</b>	Manchester Arena Inquiry	The Inquiry into the events of May 2017 <a href="#">Vol 1</a>
<b>MHSWR</b>	Management of Health & Safety at Work Regulations 1999	The regulations covering how the <a href="#">Act</a> is managed day to day
<b>NaCTSO</b>	National Counter Terrorism Security Office	The police supported office looking at the 'Protect and Prepare' elements of the Government's conquest strategy. <a href="#">Protect UK</a>
<b>NBA</b>	National Barrier Asset	Managed by the National Vehicle Threat Mitigation Unit ( <a href="#">NVTMU</a> ), the National Barrier Asset, is a substantial amount of tested hostile HVM products
<b>OR</b>	Operational Requirements	High level client security <a href="#">needs</a>
<b>PAS68</b>	Publicly Available Specification	This is a British Standard ( <a href="#">BS</a> ) for high energy impact testing of HVM products
<b>VADS</b>	Vehicle Attack Delay Standard	<a href="#">Tests</a> against aggressive and repetitive vehicle impacts for HVM products
<b>VDA</b>	Vehicle Dynamic Assessment	An assessment of vehicle speed achievable at the target



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