



SAFETY FIRST

Keeping sites safer from hostile or errant vehicles. **Iain Moran** discusses the importance of risk assessment and specification in protecting people and assets from hostile and errant vehicles.

While weaponisation of vehicles is relatively rare, hostile vehicles can pose a significant threat to both people and assets. And terrorism is not the only risk. Thieves and protestors can also use vehicles to damage properties. Then there is the issue of drink and drug driving and, of course, simple human error.

The risks may be rare, but they are real. There needs to be a considered understanding of the nature of that risk and how it can be mitigated in a way that is both effective and proportionate.

Terror attacks at events and within busy urban centres are well-documented. Along with the organised gatherings targeted at the Berlin Christmas Market and Bastille Day celebrations in Nice, the London Bridge attack highlights the potential risk of terror attacks happening at any time and in any public realm environment.

Meanwhile, according to data collected in the US over the past decade by the Storefront Safety Council, there have been more than 24,000 storefront crash incidents in the past 10 years in the USA. This data has been scaled up by Lloyds of London, and the

scaled data indicates that storefront crashes occur globally as many as 100 times per day, with 46 percent of all incidents resulting in an injury, and 8 percent resulting in a fatality.

These storefront crashes include both accidental and malicious events. While a recent spate of coffee shop storefront crashes can be attributed to reckless driving, these incidents demonstrate the potential of such events to damage a brand, highlighting how intentional attacks could be used specifically as a tactic to cause reputational damage. For luxury brands, there is also a threat from ramraid attacks, where vehicles are used as a means of gaining entry to take high-value stock from the store; a practice that can cause significant damage to both the property and the brand.

In all of these scenarios, the consequences include safety risks to staff and customers – as evidenced by a recent incident when a driver mounted the pavement and hit a busy restaurant bar in Virginia, injuring 14 people, several of them seriously. But the commercial risk goes much further and includes the cost of repairs, the financial impact of business interruption and the effects on both insurance premiums and the ability to secure insurance cover.

Following an incident or in anticipation of potential increased risk, it's not uncommon to see a knee-jerk response, in the name of due diligence. But, although putting measures in place to reassure stakeholders and deter attacks is a positive step forward, only a detailed consideration of risk, coupled with a holistic approach to tailoring the right solution will really provide peace of mind that people and assets are protected.

Certified and tested hostile vehicle mitigation (HVM) systems, which have been correctly specified and installed, are a practical solution to mitigating risk. However, it is just as important to ensure that the systems chosen are suitable and proportionate for the specific level of risk for the individual environment as it is to mitigate risk. Over-specification not only inflates the cost of protecting the environment but can also over complicate or delay the installation, and can result in the measures becoming intrusive.

The anticipated UK Protect Duty legislation looks likely to recommend a threats, vulnerabilities and risk assessment (TVRA) approach to identifying risk. We recommend that this assessment be carried out by experts that can offer a turnkey approach to risk assessment, specification, supply, installation, deployment and servicing of HVM equipment. It's important that someone underwrites the risk and in this way event management companies, venues, local authorities and commercial business can outsource all due diligence to a single trusted and quality assured partner.

At Crowdguard, we have developed a rigorous TVRA process so that we are able to offer our clients this joined up approach and considered consultancy that takes account of commercial, operational and aesthetic factors, alongside safety and asset protection. This TVRA process involves an analysis of the threats for a particular location, building or brand; threats that may change. TVRA should not be seen as a one-off-exercise, therefore, but as a process that needs to be refreshed. Threats may include a change in the terror alert level, a revised road layout or threatened direct action from groups.

Threats should be considered in the context of the vulnerabilities inherent in a site's location, building, or brand. For example, potential vehicle access routes, existing security arrangements or controllability of all entrances and exits.

At Crowdguard, we include vehicle dynamics analysis in the TVRA process in order to enable the potential size and speed of hostile or errant vehicles to be considered, alongside threats and vulnerabilities, in order to assess risk. Only then can an optimised solution be designed to mitigate as much of that risk as possible.

It is an evidence-based approach to understanding risk and developing a solution that can be proven to mitigate specific threats, vulnerability and risk. The starting point for any HVM strategy should be knowledge and, armed with that knowledge, event managers, venue operators, local authorities and property owners can make informed decisions about the level of risk they are willing to accept.

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In some scenarios, it may be that the client is willing to accept a higher level of risk in order to balance risk mitigation with commercial and/or operational factors. However, where this is the case, the improved understanding of risk forms part of the defence against potential threats because the potential vulnerabilities to malicious or accidental safety or security issues can be built into safety and security practices.

At Crowdguard, our approach is to give the client our best advice for specification of a best-fit, proportionate solution, while providing potential alternatives with a summary of how the client's choices will affect their risk mitigation. We can do this thanks to our partnerships with a variety of HVM and perimeter protection product suppliers, enabling us to offer both temporary and semi-permanent solutions for a broad range of different applications.

Indeed, education and expertise are vital to both the client's decision-making and the level of protection offered by the final solution. A common mistake is for event organisers, venue operators and local authorities to assume that any IWA-14-1 HVM system will be suitable for their security requirements because it is certified. This is not the case. There is no such thing as a one-size-fits-all solution. The most appropriate solution needs to take account of factors such as the speed and force of a potential attack or accident, the ground conditions and the layout of the protected area.

The level of protection delivered by the HVM solution is also dependent on quality assurance processes and how closely the finished installation mirrors the 'as tested' performance of the HVM product. For example, Crowdguard's portfolio includes the RB50 system from Highway Care, which is installed in 4m arrays. This system was crash tested

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as a 4m array so it is almost always deployed in an 'as tested' configuration. For other systems, it is the expertise of the specification team that calculates any disparity between 'as tested' and 'as installed' performance, so that this can be factored into risk mitigation effectiveness. The difference between 'as tested' and 'as installed' should always be communicated in writing to the client so that they are fully aware of their level of risk.

Quality assurance processes are integral to effective risk mitigation because any non-compliance during installation and deployment can reduce the system's performance. The Hostile Vehicle Mitigation Installers Scheme (HVMSIS) has been designed to ensure appropriate specification and correct installation of suitable HVM systems and requires installation of the HVM by a registered company. At Crowdguard, we have developed

CERTIFIED AND TESTED HVM SYSTEMS ARE A PRACTICAL SOLUTION TO MITIGATING RISK

our own strict quality assurance processes. All operatives are manufacturer-trained and install the system as close to 'as tested' as possible, with a full understanding of impact test results. We ensure that they understand the foundation/ground conditions of the impact test and carry out all maintenance requirements. Following decommissioning and removal, all equipment is checked and maintained so that it is in peak condition for the next installation.

Alongside the safety and security considerations for best practice specification and installation, there are practicality and aesthetics considerations, because the right solution needs to enable the venue, property or location, and the occupier, visitors

or members of the public to continue functioning as normal. Consequently, there needs to be a discussion about whether the HVM protection needs to be temporary – perhaps to address a specific risk – semi-permanent to provide flexibility, or permanent. Aligned to this is a consideration of whether the solution needs to be reconfigurable – are there varying levels and types of risk at different times of day, or times of year, for example?

Access is also important. The purpose of an HVM system is to protect people and assets from vehicles, but how will it affect pedestrian access and is a pedestrian permeable solution required for some or all of the installation?

The importance of aesthetics should not be underestimated either. The goal is to help people be safer and feel safer; not to make them feel under threat. It is possible to select HVM systems that can be customised, not only to look less invasive but also for branding, wayfinding, advertising or information. This should be considered both in the context of how welcoming the environment looks and any commercial value that can be leveraged by the need for safety protection. Indeed, advertising on HVM systems can become a revenue generator. Meanwhile, solutions such as the Unafor Core, which has recently been added to the Crowdguard portfolio, can be used to enhance the aesthetics of a location. This is particularly useful for streetscapes and public realm locations, where variants of the system with planters or street furniture enhance the environment, while making it safer.

With a TVRA approach, a safety specialist can recommend the most appropriate solution to mitigate risk for the site in question, but may also provide an alternative solution that takes into account any practical issues or stakeholder concerns. When choosing between the options, it is important to understand the risk gap and make an informed, pragmatic choice, which is why it's vital to work with a specialist ●

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