

OUT OF SIGHT, OUT OF MIND

Jaz Vilkuh considers the growing aesthetic significance of hostile vehicle mitigation measures for planners and architects

The terror threat posed to the public has evolved dramatically over the last 12 to 18 months. Large-scale, meticulously planned bomb attacks have given way to vehicle assaults targeting pedestrians. Concrete blocks and barricades, largely temporary measures, have been installed in towns and cities across Europe to protect highly populated areas. But it could be argued that design aesthetics must now play a greater role in the specification and design process.

The vehicle attack on Glasgow Airport a decade ago marked a significant change in how security professionals planned and specified protective measures around airport terminal buildings. In light of the clear shift in terrorist strategy, the issue of protecting crowds of people from vehicles is now front of mind for all architects, planners and security experts. We've seen a steep rise in the number of risk assessments carried out in the UK in towns and cities over the last 12 months, covering all types of infrastructure, buildings and events.

SPECIALIST KERBING DEFLECTS VEHICLES AND STOPS THEM FROM MOUNTING THE PAVEMENT

The new threat is significantly more difficult to predict and has prompted a primitive and unsophisticated response as a result. Large metal barricades, barriers and concrete blocks have become the default solution, providing a very visible and effective method of protection. New installations in Barcelona, Nice, Berlin and Melbourne, together with those erected across the UK to protect people attending last year's Christmas markets, are cases in point. Last year's *Terrorism and Trends* report pointed out that the increase in the number of anti-terror barrier installations around landmarks, key infrastructure and public spaces with high footfall has equally reflected the sharp rise in vehicle attacks.

However, fortifying our towns and cities in this way communicates mixed messages to the general public. This type of protection clearly sends the message that local authorities are taking the terrorist threat seriously, but erecting these barriers reminds people of the threat that exists and as such, creates an

environment of fear. We've already seen numerous complaints from the public mirroring this, which has resulted in national headlines describing the barriers and barricades as eyesores that only make people more scared.

Clearly, this type of hostile vehicle mitigation (HVM) measure has the potential to deter the general public altogether, potentially affecting the businesses and urban areas that depend on a high footfall. Stopping the threat is obviously the priority, but addressing this problem should be considered of equal importance by those designing and securing cities from terrorist or criminal activity. The human psychology behind this issue constitutes a vicious circle, with the higher the perception of risk resulting in a greater threat felt by an individual. This theory applies directly to the presence of visible anti-terror security measures, such as the barriers and barricades we've seen erected over the last 12 months, which increase levels of suspicion, tension and fear among the public.

ADDING TO THE FEAR FACTOR

This is a reaction that is hard wired into the human brain. Anxiety worsens cognitive functioning as our attention is drawn away from every day life and towards something that is threatening and unusual. In effect, the very action of fortifying our town and city centres is increasing the fear that people feel.

These methods, which make little consideration for design and the aesthetics of an environment, represent something of a short-term approach when it comes to HVM and could all too easily translate to falling footfall. Installing protective measures can change the nature of urban spaces and addressing this problem presents a new challenge. In her study *Invisible Security: the impact of counter-terrorism on the built environment*, Rachel Briggs writes: "It has been argued that 'security' has become the justification for measures that threaten the core of urban social and political life – from the physical barricading of space to the social barricading of democratic society – that rising levels of security in cities will reduce the public use of public space".

To prevent this, urban planners and designers need to consider how protective measures can be integrated into a town and city centre without changing the way that people feel about how they use a particular space. Thankfully we're now starting to see a shift.

In the UK, the Centre for Protection of National Infrastructure (CPNI) has outlined aesthetic design as one of its six key guiding principles for delivering successful protective methods against vehicle attacks. And as a result, urban planners and designers are becoming increasingly unwilling to compromise on aesthetics. According to a recent report conducted by Marshalls and IFSEC Global, 79 percent have seen the number of projects requiring aesthetically focussed perimeter protection increase over the last three years. In addition, 94 percent believe that demand will ramp up across both the UK and EU.

FITTING INTO THE ENVIRONMENT

One recent example is Stefano Boeri, a leading Italian architect, who has recently specified planters to protect Florence's Government buildings and squares from vehicle attacks, which are more inkeeping with the surrounding environment than the military-style barriers common in other European cities. This tactic forms part of a more multi-layered approach when it comes to designing and planning a space, which is not limited to simply introducing new objects or barriers to block attacks.

Depending on the level of risk – which is often determined by the type of vehicle that can access the area and the speed it could reach – security should be considered at the outset, evaluating the existing road

infrastructure to keep vehicle speed down. This can include new chicanes, bumps and restricted width lanes, together with protected pedestrianised areas or water features to keep traffic as far away from highly populated spaces as possible. In addition, specialist kerbing can be introduced to deflect vehicles and stop them from mounting a pavement.

Architects are starting to consider re-enforced landscape furniture such as planters, seating, litter bins, lighting columns, cycle stands and bollards, which act as a far more subtle final line of protection than fences, barricades and concrete blocks.

Although these products look like regular landscape furniture, they are built with fortified PAS 68/IWA 14.1 certified cores – the latest Publicly Available Specification for barriers and bollards to assist in terrorism prevention, which specify a classification for vehicle security barriers and their foundations when subjected to impact. The foundations are built to varying depths, suitable for spaces with limited excavation and depending on the specified risk. Using the strongest specification, a single piece of furniture can stop a 7.5-tonne articulated lorry travelling at 50mph.

Together with the PAS 68 BSI test standard, the CPNI expects that all HVM products also comply with the International Workshop Agreement (IWA) rating. IWA 14.1 and 14.2 incorporates

Aesthetics are starting to play a greater role in the specification and design of barriers



PAS68, PAS69 and the European Committee for Standardisation (CEN) Workshop Agreement, which ensures that each model is standardised, no matter where they are built and installed, making specification simpler.

PERIMETER PROTECTION

The regeneration of Ravenscraig, a small town near Glasgow, Scotland provides a good example of how this approach has been used. A key part of the town’s development plan was the construction of a £30m state-of-the-art regional sports facility, which was used as a training base during the London 2012 Olympics and Glasgow Commonwealth Games in 2014. The venue has the capacity to host approximately 5,000 people and offers a range of sports facilities, including an indoor athletics hall, dance studios and outdoor football pitches. Its use

LARGE-SCALE BOMB ATTACKS HAVE GIVEN WAY TO VEHICLE ASSAULTS TARGETING PEDESTRIANS

for future sporting events, including the Olympic affiliated ‘International Children’s Games’ in 2021, meant that security was a key issue for planners when it came to redesigning the landscape around the centre.

As part of the risk assessment, it was decided that perimeter protection measures would need to be installed that can withstand an attempted

vehicle attack. The architects specified bollards for installation around the front of the site, protecting major pedestrian access points. Lifting bollards were also placed on the road network around the centre to enable vehicle access.

The increased threat from hostile vehicle attacks means we can expect to see architects, developers and planners make security a top priority when it comes to specification. But as this is a permanent threat, the solutions used for HVM should be considered as a long-term response. Keeping people safe but not scared will be essential, and given the potential social and commercial impacts metal barricades, barriers and concrete blocks can have on both the general public and businesses, it is vital that future measures can be both integrated seamlessly into a landscape and provide the protection the public needs ●

Jaz Vilku has almost 30 years’ experience in delivering specification consultancy for landscape products across a wide range of sectors. Alongside his role of managing director, landscape protection at Marshalls, Jaz is an associate member of RIBA and a management member of the Construction Best Practice Group.



More creative solutions include seating and planters



Picture credit: Marshalls